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ABSTRACT

Defining early reading as reading that occurs prior to the time that a child begins formal schooling, this annotated bibliography contains references on the topic from a variety of sources that include journals, books, conference proceedings, ERIC documents, dissertations, and theses and that represent the research in a number of countries. The entries cover a wide range of subjects related to early reading, such as the bilingual child, cognitive development in early readers, early reading instruction, responsive environments for young children, teaching reading by machines, the role of parents in early reading, the effects of early reading on reading achievement, and positive and negative arguments regarding the value of early reading instruction. (MAI)

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Early Reading: A Comprehensive Annotated Bibliography

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Introduction

In recent years attention in reading research has shifted appreciably from the causes of failure to the causes for success. Kenneth Goodman and Frank Smith, among others, have demonstrated the substantial benefits to be derived from the attempt to characterize the strategies of the mature reader. Work of this type has led to great insight into the psychology of reading and has provided a basis for sound pedagogical decisions.

But characterizing the mature reader illuminates only part of the picture of success in reading. Reading is a developmental process; and in order to understand more completely the notion of competence in reading, it is necessary to examine the phenomenon of success at various points along the continuum. Thus, determining how the beginning reader and the 'developing' reader make meaning from text is every bit as important as the corresponding research with mature readers.

In this regard Margaret Clark's recent publication *Young Fluent Readers* has again brought to the forefront the benefits of studying early readers, those children who learn to read prior to attending school. Such children find learning to read relatively easy and carry out the task fluently. By examining their strategies and the reasons for their success, we stand to gain considerable insight into what it is that promotes the growth of reading behaviour.

Over the years a sizeable body of literature on early reading has developed. This occasional paper is an attempt to compile a comprehensive bibliography on the topic. Of course, the term early reading has been used in a variety of ways; many writers apply it to children's initial period of learning to read. In this sense early reading is, essentially, beginning reading. However, for purposes of this bibliography early reading is defined in a more specific manner; that is, as reading prior to the time a child begins attending the institution known as school. The intent is to focus on learning to read at home, but a good deal of attention is paid to the issue of reading in the American kindergarten (which has a long tradition of being considered an informal introduction to schooling). Also, there is necessarily some overlap with other 'topics', notably readiness. But these other areas are considered only insofar as they apply to early reading.

I have attempted to bring together references from a variety of sources — journals, books, conference proceedings, ERIC, dissertations, theses and others — and from a variety of countries in order to make the information generally more accessible. Of course, use of the term comprehensive is rather bold and by no means completely justified. By the time this paper is in print there will be new sources. Without doubt I have missed others because they could not be obtained (several requests for unpublished or obscure papers have gone unanswered) or simply because I have not discovered them (the review of the literature is never complete, it seems). However, comprehensive represents the spirit of this endeavour, and thus the term has been retained in the title.

There is no real attempt to be critical in this bibliography. Thus, the bad studies are presented in the same manner as the good;

the sound, carefully worked out positions and theories occur with the trivial and ill thought-through. Of course, none of us remains truly a passive compiler in such a task, and the reader will undoubtedly discern both notes of admiration and disdain in the annotations. For those who would like to see this critical process taken a step further, I suggest "Early Reading: A Selected Annotated Bibliography" (Teale & Jeffries, 1979). In that bibliography there is an attempt to discriminate among the publications and retain primarily those believed to be most worthwhile. (Of course, the influential and well-known publications — even if they are bad — and the papers which represent a facet of early reading in which virtually no good work has been conducted have also been included there.)

A final note on the annotations which appear below: I have endeavoured to annotate each of the references personally. However, in some cases this was not possible because of one or another of a virtual myriad of reasons. Where I was unable to obtain and annotate a reference, one of three things has been done: (1) an annotation from an existing bibliography (e.g. ERIC, *Dissertation Abstracts International*) has been used as the basis for the annotation herein, (2) a composite annotation has been put together from descriptions supplied by various authors in various sources (needless to say, these annotations need to be viewed with a good deal of caution), or (3) the reference is not annotated but appears in the bibliography at the end of the paper. These types of annotations/rerferences are marked with the following symbols: † represents (1), an annotation taken from an existing bibliography; * represents (2), a composite annotation; and ¥ indicates a citation for which no annotation appears.

As new references appear in the literature and as previously unobtainable references come to hand, a supplement to this bibliography will be made available so that it might approximate as nearly as possible what it is intended to be — comprehensive.

ANDERSSON, T. A proposed investigation of preschool biliteracy. Paper presented at the Fourth International Congress of Applied Linguistics, Stutgart, August, 1975.

This paper outlines the rationale and timetable for a longitudinal study which would evaluate the hypothesis that Spanish-dominant Mexican-American children can learn to read Spanish and understand English between the ages of two and four and then learn to read English between the ages of four and six, thus entering school with readiness at least equal to that of the monolingual English speaking child. The programme was planned to be conducted in the homes of the children (Austin, Texas area) by parents and visiting bilingual teachers, aides and volunteers. The method for teaching reading in both languages is essentially that advocated by Doman (1964).

ANDERSSON, T. Biliteracy, or the bilingual child's right to read. *The Journal of the Linguistic Association of the Southwest,* 1975, 1, 54-62.

Andersson argues that a non-English speaking child in an English speaking society has the right to learn to read in his/her mother tongue initially and subsequently can learn to read English by transferring his/her learning habits to the acquisition of literacy in English.

This argument is then applied specifically to young (preschool) children. The author cites anecdotal, pseudo-scientific and scientific sources in an attempt to establish the idea that the young child has a great capacity for language acquisition and thus early childhood is the best time to attempt to capitalize upon this learning potential. Anderson maintains that preschool bilingual children should be taught to read in two languages and that they should be taught in a manner similar to that described by Doman (1964) and Söderbergh (1971).

ANDERSSON, T. The bilingual child's right to read. *Georgetown University Papers on Language and Linguistics,* Number 12, 1976, 63-72.

Again much the same content as 'Biliteracy, or the Bilingual Child's Right to Read' and 'The Bilingual Child's Right to Read' where Andersson cites the work of such people as Jane Torrey, Burton White, Glenn Doman and Ragnhild Söderbergh in support of his idea that young children should be taught to read and that Mexican-American children should become biliterate in early childhood. A brief outline of his Preschool Biliteracy Project is included. (See his 'A Proposed Investigation of Preschool Biliteracy' above for more details on this project.)

ANDERSSON, T. A preschool biliteracy project. *Georgetown University Papers on Languages and Linguistics,* Number 13, 1976, 1-7.

This paper essentially replicates the rationale of Andersson's 1975 'A Proposed Investigation of Preschool Biliteracy' and then goes on to include new information about the results of the first few months of the project. There were at that time eighteen children

enrolled (ages 1;2 to 5;4) ranging from ENGLISH-Spanish to English-SPANISH in language dominances. Parental guidelines for teaching reading are outlined. Andersson notes that the project had not yet attracted any working class mothers.

ANDERSSON, T. Preschool biliteracy: Historical background. *Hispania*, 1977, 60, 527-530.

This article strongly recommends a bilingual program that is not merely transitional but one which will establish oral fluency and literacy in both languages. The argument is developed much along the lines of the 1976 paper 'Preschool Biliteracy' (see above). Teaching Mexican-American children to read in Spanish and English before coming to school is advocated.

ARTLEY, A.S. Reading in kindergarten. In M.A. Dawson (ed.). *Combining research results and good practice*. 1966, 2, pt. 2. Newark, Delaware: International Reading Association. Pp. 7-13.

Artley establishes by reviewing research that some children should be taught to read in kindergarten. Then he examines the nature and results of the following kindergarten programmes which include reading and/or prereading instruction in their curricula: the Denver Study (Brzeinski, 1964 a,b), Sutton (1965, 1969), Georgiady et. al. (1965), Durkin (1964 a). He concludes that kindergarten has a definite role to play in promoting reading.

* BACCI, W. Children can read in kindergarten. *School Management*, 1961, 5, 120-122.

The author found that some children in the Carle Place, New York schools were reading at a grade three level by the time they reached first grade.

BECK, I.L. *A longitudinal study of the reading achievement effects of formal reading instruction in the kindergarten: A summative and formative evaluation.* Unpublished doctoral dissertation, University of Pittsburgh, 1973.

This study was conducted for the five school years 1967-68 through 1971-72 using the total kindergarten population of one school. Each year some of the kindergarten children received a formal, decoding, structured approach to reading; and the remainder of the children received no reading instruction. The main question of the study was: do those children with kindergarten reading instruction achieve better at the end of grades one, two, three, four and five than those who did not receive reading instruction in kindergarten? (Homogeneity of children's IQ's was maintained.) Reading achievement was measured using the Stanford Achievement Test. Results showed that for all years there were statistically significant differences (from 1 to 2+ stanines) favouring those who received reading instruction. Analysis of covariance (with IQ covaried) also resulted in statistically significant superiority for the kindergarten reading

group. Beck concludes that the answer to the research question is 'yes', those children with reading instruction in kindergarten did demonstrate and maintain superiority in reading. It is worth noting that the children who received reading instruction in kindergarten also received "individualized instruction" in reading during subsequent years in school. Beck does not mention if the no kindergarten reading instruction group also received appropriate individualized instruction.

BECK, J. *How to raise a brighter child: The case for early learning.* New York: Trident Press, 1967.

Chapter 7 of this book is titled "Should you teach your preschooler to read?" In an anecdotal, chatty fashion Beck reviews the pro's and con's of early reading and discusses various research/programs in the areas (e.g. O.K. Moore-at length; Durkin, Doman). She also describes the rationale/method of her essentially phonics oriented comic strip feature designed to teach reading to young children which ran in the Chicago Tribune for thirteen weeks during 1964. Scattered copiously throughout the chapter are letters from this and that parent commenting upon and attesting to the author's method for teaching preschoolers to read. Generally it can be said that Beck advocates teaching preschool children to read if the parents want to and if both the parents and the child enjoy it. She maintains that there should be no pressure and that phonics methods are better than sight word (whole-word) methods. Also she states that regardless of the method or motivation for teaching a preschooler to read, most people who attempt the task in any consistent way are generally successful.

BEGG, J.A. & CLAY, M.M. A note on teaching a preschooler to read: Some problems of evaluation. *New Zealand Journal of Educational Studies,* 1968, 3, 2, 171-174.

The progress of one three-year-old child who was receiving reading instruction from his mother was compared with twenty five-year-old children of similar intelligence who were receiving group instruction in school. The authors concentrate in this paper on the methodological problems concerned with early reading. The reading programme being used for the three-year-old was similar to that advocated by Doman (1964), and some of Doman's claims about the method were investigated.

The child in this study did make progress comparable to that made by the five-year-olds in the sample. However, contrary to Doman's proposition that it is easier to teach a young child to read, the authors found that "it was not really easy to teach a three-year-old to read" (p.172). The authors recommend that in future research in early reading the following factors be incorporated or investigated: (1) The value of intensive versus more relaxed, long-term contact programme, (2) The rate of loss when instruction is discontinued, (3) determination of the levels (semantic, word, letter) on which young children are able to learn about languages, (4) The impact of school instruction on children who have had various types of preschool programmes.

BLANTON, W.E. Preschool reading instruction: A literature search, evaluation and interpretation. Final Report. Volume I: Information for the administrator. Volume II: Information for the teacher. Volume III: Information for the parent. ERIC documents ED 069 345, ED 069 346, ED 069 347, 1972.

In Volume I Blanton discusses the origins and types of preschool reading instruction. He also reviews research conducted through 1970-71 on preschool reading and reading readiness. The bulk of the report consists of suggestions to administrators implementing a preschool (kindergarten) reading program. Organization, objectives, evaluation and other related factors are discussed from the administrators' point-of-view.

Volume II also contains the outline of origins/types of early reading instruction and the review of research. Blanton then offers suggestions for teachers which include activities and behavioural objectives for developing readiness as well as behavioural objectives, activition and materials appropriate for preschool reading instruction.

The information for parents (Volume III) includes brief discussions of authorities' opinions on reading and a short overview of different methods. Blanton presents the view that preschool reading instruction is desirable if conducted with no pressure and only when the child expresses an interest in reading. He also maintains that formal ("carefully planned") instruction is preferable to informal. Suggestions about appropriate activities and materials for preschool reading instruction are provided.

BONEY, C.D. Teaching children to read as they learned to talk. *Elementary English*, 1939, 16, 139-141, 156.

Boney maintains that preschool (kindergarten) reading instruction should take the form of general guidance in a concentrated, enjoyable reading environment. In such a situation the child could learn to read much as he/she learned to talk, by existing in a 'reading environment' and getting individualized responses to questions asked about the meanings of words, thus grasping the symbol "without an undue amount of difficulty".

BRIGGS, C. & ELKIND, D. Cognitive development in early readers. *Developmental Psychology*, 1973, 9, 279-280.

The authors present a brief preliminary report of an ongoing longitudinal assessment of 16 matched pairs of five-year-old readers and non-readers. The subjects were given a battery of perceptual, motor, cognitive and personality tests. Analysis suggested that early readers were significantly superior to non-readers only on Piagetian concrete operational tasks. Briggs and Elkind conclude that learning to read English is facilitated by possession of concrete operations. Other findings were that mothers of early readers had more education than mothers of non-readers and that fathers of early readers read to their children more often than fathers of control children.

BRIGGS, C. & ELKIND, D. Characteristics of early readers. *Perceptual and Motor Skills*, 1977, 44, 1231-1237.

Various tests of cognitive development, linguistic development and personality were carried out on 33 white early readers (defined according to Durkin's (1966) criteria) and on 33 control children matched on sex, age, classroom and Peabody Picture Vocabulary Test Score. In addition, interviews with parents were conducted in order to obtain demographic data, information on parenting practices related to reading, and behaviour of early readers.

Results showed early readers superior to control children on the measures of conservation, auditory closure and sound blending of ITPA, and the similarities subtest of the Elkind Creativity Test. Data from interviews showed early readers came from higher SES homes. Parents of early readers provided significantly more reading/writing materials and instructions on their use. There were no significant differences in behaviour patterns (play preferences) of the two groups. From these data the authors conclude that the presence of concrete operations on the child, coupled with a high parental achievement motivation, facilitates early reading in children.

* BROWN, M.W. *A study of reading ability in preschool children*. Unpublished master's thesis, Stanford University, 1924.

Brown describes her successful efforts to teach two three-year-olds to read. The teaching sessions took place in the children's homes over a three month period. The author also details the methods by which she attempted to teach two groups of preschool children (aged 1;10 to 5;11) to read.

BRZEINSKI, J.E. Beginning reading in Denver. *The Reading Teacher*, 1964, 18, 1, 16-21.

Brzeinski argues against the traditional mental age and associated criteria for reading readiness. He then sketches out the rationale of the Denver program which essentially is as follows: Children know the sounds and meanings of many words. What they need to be taught is that the sounds they know are represented by particular letters and combination of letters. These skills, in connection with use of context clues, can provide the first steps toward independent reading. He then outlines the scope of Denver project which began in 1960 and was intended to study students in a longitudinal fashion from their kindergarten year through grade fives (1966). (For more details and subesequent results see Brzeinski, 1964 b and McKee, Brzeinski & Harrison, 1966.)

BRZEINSKI, J.E. Reading in the kindergarten. In W. Cutts (ed.) *Teaching young children to read*. Proceedings of a Conference, November 14-16, 1962. Washington, D.C.: U.S. Government Printing Office, 1964. pp.50-58.

This article reports on the first two years of the Denver kindergarten reading project. In the project 2000 children in the experi-

mental group received reading instruction in kindergarten (a formal program, 20 minutes per day, heavily phonics based; see P. McKee and M.L. Harrison, *Program in Skills Basic to Beginning Reading* (1960) for an indication of the nature of the approach). The control group consisted of 2000 children also, and they received the "regular program" (no description given; the reader is referred to Denver Public School curriculum guides). The study continued in grade one where half the experimental group received an "adjusted program" and half the "regular program". The main variable was the time of initial instruction in reading (kindergarten versus first grade). The hypotheses were that the experimental group would read better and have better attitudes toward reading and that the experimental group getting the adjusted grade one program would continue to be superior in reading and general school achievement. Results confirmed the hypotheses: (1) The time of introduction to beginning reading had a significant effect on achievement in kindergarten and at the end of grade one and (2) The best reading achievement occurred when adjustments were made in the first grade program which took into account the achievement in kindergarten. (See Mood (1967) for an critique of this study.)

BRZEINSKI, J.E. Early introduction to reading. In J.A. Figurel (ed.) *Reading and inquiry,* Newark, Delaware: International Reading Association, 1965. Pp.443-446.

This article reviews the research of O.K. Moore, Dolores Durkin and others, along with the Denver project results, all of which indicate that early instruction has beneficial effects in terms of subsequent performance in reading. The author also outlines the procedures of highly structured, heavily phonics based early reading curriculum (similar to that used in the Denver project) meant for teachers and parents.

BRZEINSKI, J.E. & HOWARD, W. Early reading - How, not when! *The Reading Teacher,* 1971, 25, 239-242.

The authors maintain that research on early reading (the Denver study) shows clearly that reading can be taught to young children. They argue that the focus of research must now shift to how teaching should be done. A co-ordinated effort in which a critical analysis and compilation of existing research data and a planned program for designing future research in early reading are called for.

CALLAWAY, W.R. Early reading from a biological perspective. In L.O. Ollila et. al. (eds.) *Learning to read; reading to learn: Proceedings from the Transmountain Far West Regional Reading Conferences (2nd),* Victoria, British Columbia, 1973. Pp. 11-27.

The author argues that educators and psychologists have obscured the idea of the possibility of early readers because of attempts to define intelligence in a general way. He maintains that humans have special capacities that do not depend upon the processes of general maturation for their initiation and development (e.g. language development) and that early reading is one of these special capacities.

Callaway attempts to account for his child's reading "breakthrough" at 2;8. He posits that the reason could not have been general intelligence because the child would have had to have an IQ of 200 (spurious logic used here) and dismisses environmental factors as not being able to account for such acceleration. He concludes (using ethological evidence from biological studies) that specific genetic information is what facilitates early reading and that this biologically determined skill is dependent upon input from environment at certain critical periods. This article is very reminiscent of Chomsky's ideas of a Language Acquisition Device (in this case applied to reading).

CHRISTIAN, C. Preschool biliteracy: Preschool literacy in Spanish. *Hisponia*, 1977, 60, 530-532.

This article is a 'chatty' case study about the author's two children (one boy, one girl) who began reading in Spanish at about two years old and upon entering kindergarten learned quickly to read English although they had spoken the language only minimally before entering school. There is not a great deal of attention to method of learning/teaching in the article, but Christian is associated with Andersson (see above) and thus with Doman's (1964) ideas on early reading.

CLARK, M.M. *Young fluent readers*. London: Heinemann Educational Books, 1976.

Like the work of Dolores Durkin, Clark's book represents a major comprehensive study of early reading. Clark observed over a period of years 32 children who were reading fluently and with understanding when they started school at around five years of age. She focused especially on the readers' IQ, language abilities, auditory discrimination, preschool experiences and home background. No control group was included in this study, but Clark does compare and contrast the early readers with non-early readers who underwent similar assessment in her study reported in *Reading Difficulties in Schools*.

Results showed that as a group the 32 readers were above average in intelligence; individuals ranged in intelligence from average to superior. The early readers' strengths tended to be in the verbal rather than the non-verbal aspects of the tests. The subjects came from a wide range of home backgrounds and family sizes; their parents had a variety of levels of education. One factor common to the home backgrounds was that the parents found their families stimulating and absorbing and that most of the children had "an interested adult who talked to and listened to them" (p.102) at a stage when they were interested in reading. These adults read to the children, answered their questions about reading and were generally engaged in conversation with the children. The most common characteristics parents noted in regard to early readers were powers of concentration and a self-sufficiency which meant that they were content to be on their own. Few parents had consciously attempted to teach their children to read. Clark also found that the local libraries played an important role in providing materials for these early readers. For some of the early readers the initial interest in reading was connected with print in the immediate environment

(including that on television) rather than specifically in books. Follow-up reports fr[illegible] schools indicated that these fluent readers continued to show impressive achievement in the language arts.

Clark concludes that her findings are similar to and amplify those of Durkin (1966), King & Friesen (1972), Krippner (1963) and Torrey (1969). She also maintains that the role of the library was a striking feature of her study and that there is a need to find more ways of developing links between the library and the community to promote early reading. Clark also cites the importance of frequent reading and rereading of familiar texts in helping these early readers become 'sensitized' to written language and giving them a means of understanding what the act of reading is all about. She emphasizes that although the progress of the 32 subjects was dependent upon particular characteristics of each child, the interacting of the child with the encouragement, stimulation and accepting interest of an adult was of crucial importance.

COHAN, M. Two and a half and reading. *Elementary English*, 1962, 38, 181-183.

This article reports on a two and a half-year-old girl's learning to identify 40 words in a 20 day period. Emphasized are the facts that the words came from the child herself and that the mother played games with words, all the while praising the child's correct responses. An attempt was made to get the child to read sentences also, but no progress was made as the child's interest had waned almost completely.

DAVIDSON, H.P. An experimental study of bright, average, and dull children at the four year mental level. *Genetic Psychology Monographs*, 1931, 9, 119-289.

This study investigated the questions (1) To what extent can children with a mental age of four learn to read and (2) Will bright, average, and dull children of an MA of four learn to read equally well under the same experimental conditions? Thirteen white American native English speakers aged 3;0 to 5;5 received 80 days of reading instruction (approximately 10 minutes per day). The instructional program is explained in great detail in the article. Basically it was a whole word-sentence method. No phonics were taught. Results indicated that at least some children of an MA of 4 can learn to read and that there was a great superiority of the bright group with the average group slightly superior to the dull. The author emphasizes, however, the large individual differences within each group. The two most successful readers in the program were reading equivalent to an end of grade one level.

DOMAN, G. *How to teach your baby to read: The gentle revolution*, New York: Random House, 1964.

Using suspicious logic and largely pseudo-scientific evidence, Doman argues that it is possible to increase children's learning greatly and that children should learn to read between the ages of one and five. He maintains that the older the child gets, the harder it is

to teach him/her to read. The bulk of the book describes Doman's method for teaching preschoolers to read. The basic methodology is 'whole-word', and the basic spirit of the program is that the introduction itself must always be approached "joyously".

DURKIN, D. A study of children who learned to read prior to first grade. *California Journal of Educational Research*, 1959, 10, 109-113.

Durkin reports on the first year of her California Study of 49 early readers. The results and conclusions are summarized below in Durkin (1966).

DURKIN, D. Children who learned to read at home. *Elementary School Journal*, 1961, 62, 14-18.

This article reports on the first two years of Durkin's California study of 49 early readers. For a complete summary see Durkin (1966).

DURKIN, D. Children who read before grade one. *The Reading Teacher*, 1961, 14, 163-166.

Durkin briefly outlines the results of the first year of her California study and proposes three "emerging hypothesis": (1) Intelligence tests are seriously inadequate for identifying 'what it takes' to learn to read. (2) Particular personality characteristics are important to learning to read. (3) A child's perception of what it means to read affects his/her attitude toward and achievement in reading.

DURKIN, D. An earlier start in reading? *Elementary School Journal*, 1962, 63, 147-151.

Durkin uses data from the first three years of her Californian study to determine if an earlier start in reading is beneficial. She concludes that children do profit from an earlier start and that the lower the child's intelligence, the greater seems to be the advantage of starting early. (See Durkin, 1966 for more details on this study.)

DURKIN, D. Children who read before grade 1: A second study. *Elementary School Journal*, 1963, 64, 143-148.

This article is a report of the first-year findings of Durkin's New York study of 30 early readers. Complete results and conclusions are summarized below in Durkin (1966).

DURKIN, D. Should the very young be taught to read? *NEA Journal*, 1963, 52, 20-24.

The author cites Sputnik, Bruner's *The Process of Education*, Montessori education and her own California and New York studies as primary reasons for the current (1963) focus on pre-first grade reading instruction. Durkin, argues that kindergarten programs should provide all children with the opportunities to start learn-

ing to read. How each child responds to the opportunites, she maintains, will indicate readiness or lack of it. She goes on to suggest ways in which informal opportunities for reading might be provided in the classroom. For those few children who show special interest and ability in reading, Durkin says that more systematic instruction could be provided.

DURKIN, D. A fifth year report on the achievement of early readers. *Elementary School Journal*, 1964, 65, 76-80.

This article summarizes findings from the first five years of the author's California study of 49 early readers. A complete summary of these data and conclusions are presented below in Durkin (1966).

DURKIN, D. Children who read before first grade. In W.G. Cutts (ed.) *Teaching young children to read*. Proceedings of a Conference, November 14-16, 1962. Washington, D.C.: U.S. Government Printing Office, 1964. Pp. 78-84.

In this article Durkin reviews the findings of her California study and examines especially the comparison of the 49 early readers with 201 children in a control group in an attempt to determine if an early start in reading helps. The results from this study are summarized in Durkin (1966) below.

DURKIN, D. Early readers - Reflections after six years of research. *The Reading Teacher*, 1964, 18, 3-7.

Durkin comments upon some of the accidental and incidental things she noticed and learned from 1959 to 1964 in her California and New York studies of early readers. She notes that in 1964 the attitude toward teaching children to read early was generally more positive than it had been in the late 1950's. But she points to the degree of a 'bandwagon' effect and stresses that the decision to teach reading in a kindergarten situation should be based upon the individuals, not on everyone or no one policy. Durkin also points out that over half of the preschool readers in her studies were interested in writing before they showed any interest in reading. She recommends that early instruction in reading stress writing as well. Finally Durkin mentions that the children were not necessarily interested in reading or writing every day. Thus, she suggests a good deal fo flexibility and informality when working with young children so that their interests will be tapped and their attitudes will remain positive.

DURKIN, D. *Children who read early*. New York: Teachers College Press, 1966.

Described in this volume are Durkin's two major studies of early readers, the California Study and the New York City Study. For each of the studies Durkin defined as early readers beginning

grade one children who (1) could identify at least 18 words from a list of 37, (2) obtained a raw score of at least 1 on a standardized reading test and (3) had not received school instruction in reading. She reports on information about the intelligence, reading achievement, family backgrounds, preschool experience and personal characteristics of the early readers. In addition, she presents case studies of 5 early readers from the California study and 6 from the New York study. The scope and major conclusions of the studies are summarized here.

The Oakland, California Study: Durkin identified 49 early readers from a population of 5,103 children and studied them for a period of 6 years. The IQ's of the early readers ranged from 91 to 161, with a median of 121. The medians and ranges of reading achievement for the subjects in each of the six years of the study are as follows:

End of Year	Median	Range
1	3.7	2.3 - 5.6
2	4.9	3.3 - 8.9
3	5.3	4.4 - 10.6
4	6.7	4.8 - 11.2
5	7.6	5.0 - 11.7
6	9.0	5.2 - 12.3

Durkin also compared at years 3, 5 and 6 the early readers' achievement with that of a control group of 201 equally intelligent classmates who had the same teachers but who were not early readers. For years 3 and 5 the achievement for the early readers was significantly higher. For year 6 the early readers' achievement continued to be higher, but not significantly so.

Durkin interviewed the families of the 49 early readers and the early readers themselves in an attempt to get information about (1) family background, (2) the early reader him/herself and (3) the early reader's reading ability. Major findings from the interviews were that the early readers came from a wide range of socioeconomic backgrounds, that all of the 49 children were read to at home, that being read to was an especially important source of interest in reading development, that the mother and older siblings were the 'most important others' who influenced the early readers' reading abilities, that 38 of the 49 families did not deliberately set out to teach their children to read, that early readers tended to have available an abundance of reading material, that many of the early readers were characterized as 'pencil and paper kids' and that for many of these children an interest in writing preceded and led to an interest in reading.

The New York City Study: This study was conducted for three years and explicitly set out to compare early readers with non-early readers on all dimensions investigated in the California Study. Durkin identified 156 early readers from the New York City Schools and monitored their reading achievement for a three year period.

She randomly selected 30 of the 156 children and matched them on intelligence with 30 non-early readers. These 60 subjects were studied in more detail than the 156 for the purpose of drawing conclusions about factors that are especially significant in fostering preschool children.

The 156 early readers ranged in IQ from 82 to 170 (median = 133). (The group of 60 children was comparable in IQ to the 156 subjects.) The medians and ranges of achievement for the 156 early readers are as follows:

End of Year	Median	Range
1	3.7	2.3 - 7.2
2	5.1	3.0 - 8.7
3	6.1	3.4 - 11.2

All other results summarized here involve the 30 early readers and 30 non-early readers. With respect to reading achievement, Durkin found that the 30 early readers were significantly higher for all three years of the study, though the differences did get smaller across the years.

From interviews she received results similar to those obtained in the California Study. There were some differences and additional points, however. In this study the mother alone was the person who most influenced the early reader's reading. The early readers were described as intelligent, curious and persistent. For the most part help with reading was given as a response to the children's questions.

For the comparisons of the early readers with the non-early readers Durkin found, among other things, that more early readers were read to at home, more early readers liked to play alone and were described as being adept at "quiet" activities, more mothers of early readers read more often than the average adult and more parents of early readers gave preschool help with word-related activities.

Overall Conclusions from Both Studies: The major conclusions which Durkin draws from the findings of the California and New York City Studies are the following:

(1) Early readers as a group maintain their lead in reading achievement over non-early readers of the same mental age.

(2) An early start in reading does no academic, physical or social injury to children. In fact, an early start has benefits in reading achievement. Furthermore, the value of an early start is especially great for children of low IQ.

(3) The personal characteristics of early readers and non-early readers are very similar.

(4) Their families, on the other hand, are quite different. The parents of early readers show a greater willingness to help with reading; they respond to the children's questions about words and reading.

(5) The early readers learned to read by what would be characterized as a language arts program. Scribbling, drawing and writing were important in the early readers' learning to read. Being read to created for the early readers an interest in reading and led to questions about words.

DURKIN, D. When should children begin to read? In H.M. Robinson (ed.) *Innovation and change in reading instruction.* Sixty-seventh Yearbook of the National Society for the Study of Education. Chicago: University of Chicago Press, 1968. Pp. 30-71.

In the first half of this article Durkin provides a brief historical perspective on the question of when reading instruction in school should begin and then, also from an historical point-of-view discusses the concepts of reading readiness and its measurement. She maintains that the kindergarten year can be the beginning of reading instruction in school, depending upon how reading is to be taught. She explains that kindergarten children are neither ready nor unready to read. Instruction is a question of making reading-related activities appropriate to the children's levels of development.

Durkin then shifts her perspective to consider the individual child as she focuses on the question 'When should a child begin to read?' She reviews the traditional objections to and claims in support of preschool reading and finds truths and falsities on both sides. She concludes that the question of when to begin reading has no single, unequivocal answer. She goes on to provide recommendations for preschool reading instruction, recommendations which maintain the focus of attention on the child and what he/she is trying to do.

DURKIN, D. A language arts program for pre-first-grade children: Two year achievement report. *Reading Research Quarterly,* 1970, 5, 534-565.

Using the findings from her New York and California studies (Durkin, 1966) Durkin created a program designed to provide the opportunity for preschool children to develop their abilities in the language arts. The program was characterized by (1) giving a great deal of attention to writing as well as to reading, (2) using student-centred interests for developing language arts activities, (3) employing primarily a whole-word approach for the first year with incidental attention to phonics, (4) teaching letter names and numerals and (5) reading to children daily. Thirty-six 'volunteer' children (IQ 92-146; C.A. 3;9 - 4;10) from a small American mid-western community took part in the two-year program. Achievement tests were administered at the end of the first and second years of the program. Results are as follows:

	First year (mean)	Second year (mean)
No. of numerals identified (0-50)	13.8	47.1
No. of letters identified (0-52)	37.9	49.7
No. of words identified	29.1	123.8
No. of sounds identified	not tested	15.2

In discussing the results Durkin raises the question of the relative extent of these accomplishments. She maintains that interpretation in a comparative fashion is difficult because of the lack of available information on the achievement of other young children in other programs. Durkin also discusses the importance of the teacher variable in these children's achievement.

She draws conclusions about the benefits and feasibility of such a program for all preschool children in a cautious manner, maintaining that more carefully designed longitudinal studies are needed to answer such questions.

DURKIN, D. Early reading instruction - Is it advantageous? ERIC Document ED 072 413, 1971.

From her review of the literature on pre-first grade school programs for teaching reading, Durkin concludes that (a) few studies exist and (b) what studies there are fail to help answer the question of the value of an earlier start in reading because they are flawed in one or more ways. She discusses the following typical shortcomings of the studies: (1) there is no indication of the time spent on reading, (2) the children's achievement is not (adequately) described, (3) the type of instruction employed is limited, (4) the duration of the study is usually only short-term. Durkin discusses the research into her language arts program for pre-first grade children (see Durkin, 1970) and concludes that it is very difficult to learn about the value of earlier starts in reading because schools often seem unable/unwilling to take advantage of them. She maintains that there simply is not enough known to answer the question posed in the title of the article and calls for more carefully documented research in the area.

DURKIN, D. *Teaching young children to read.* Boston: Allyn and Bacon, 1972.

Durkin wrote this book to "help nursery school, kindergarten and first grade teachers provide instruction that is both appropriate and productive" (p.x). The theory and recommendations for practice contained in the book have been developed as a result of her California and New York Studies of early readers (Durkin, 1966) and her subsequent pre-first grade language arts curriculum (Durkin, 1970).

The first section of the book presents an historical perspective on the theory of reading in American nursery schools and kindergartens in which Durkin explains why these areas have traditionally had the goal of social and emotional development of the child, and why some nursery school and kindergarten teachers now (1972) use workbooks and drill to give their programs an air of 'academic respectability'. Also included is a chapter on reading readiness and chapters devoted to the behavioural characteristics of the young child and the characteristics of excellent teachers of young children. The heart of

the book are the sections on Durkin's conception of a language arts approach (one chapter) and her recommendations on instructional techniques for (1) extending the listening/speaking vocabulary, (2) teaching writing, (3) teaching reading (word identification, word analysis) and (4) language arts programs. It could be said that Dunkin's theory and instructional suggestions are based on the premise that children younger than six can learn to read through methods that are devoid of pressure and full of interest.

DURKIN, D. A six year study of children who learned to read in school at the age of four. *Reading Research Quarterly*, 1974-1975, 10, 9-61.

This article reports on the achievement in reading from first through fourth grades of children who participated in a two-year language arts curriculum designed for preschool children (as described in Durkin, 1970). In addition, results from a control group who did not participate in the program but who had attended kindergartens in which some attention was given to reading, were compared with those of the experimental group. Results showed that experimental and control group mean raw scores on intelligence tests never differed significantly during grades one through four. For that same period mean raw scores on reading tests (SRA Achievement Test, grades 1-4; Gates-Macginitie Reading Test, grade 4) were always higher for the experimental group. For grades one and two the differences were statistically significant; in grades three and four, they were not. Durkin concludes that although they were not formally assessed as being ready, subjects in both the control and experimental groups demonstrate that earlier starts in reading lead to satisfactory accomplishments rather than problems. She emphasizes that results showing a failure of the experimental group to maintain significant leads do not necessarily contradict her earlier studies (Durkin, 1966) which found that early readers who learned to read at home maintained a statistically significant lead over the non-early reading classmates through grade six. Through this report she repeatedly notes that the school in the study was very reluctant to adjust instruction to the children from the experimental group. She feels that the home environment which fosters early reading could well continue to support reading achievement but that especially for children who learn to read in a school/kindergarten situation, "earlier starts in reading are meaningless if schools are unwilling to alter what is taught in the years that follow kindergarten" (p.60).

DURKIN, C. Facts about pre-first grade reading. In L.O. Ollila (ed.) *The kindergarten child and reading*. Newark, Delaware: International Reading Association, 1977. Pp.1-12.

Durkin summarizes findings about early reading from her research and discusses the history of the issue of early reading from the mid-1950's to the present. She also reviews other studies into earlier starts to reading instruction in school. Durkin then focuses on instructional practices in the American kindergarten and argues that most changes which have been implemented in the kindergarten were not rationally planned but 'happened' because of fashion or community reaction. She concludes that most American kindergartens today

are attempting to teach reading and that the usual way of doing so is by commercially produced materials/reading schemes. Durkin maintains that child-centred instruction would be most appropriate for teaching reading in the kindergarten but points out that in order for such instruction to be implemented it is necessary to have a knowledgable, imaginative teacher and a school (administrator) that will support such a programme.

ELLIS, D.J.W. *The cognitive development of early readers.* Unpublished doctoral dissertation, Northern Illinois University, 1975.

Ellis studied 20 early readers (children between four and six years old who could read at pre-primer level or higher and who had not attended school) for the purpose of describing their (1) cognitive development (with emphasis on their accomplishment of eight Piagetian tasks), (2) oral reading abilities and (3) home background experiences. Findings showed that classification tasks correlated significantly with the subjects' instructional reading levels. The language and total Piagetian task scores correlated significantly with the subjects' independent reading levels. The decentration and total Piagetian task scores correlated significantly with mental age and intelligence. The mental ages of the subjects correlated signficantly with the language task scores. Word recognition scores were used to separate the early readers into (a) advanced and (b) beginning early readers. The advanced group performed significantly better on conservation tasks.

The description of the children's oral reading was concerned largely with attempting to pinpoint the types of errors made and the sources used for identifying words. Data on the home backgrounds of the early readers showed that all 20 were middle class and that they had available a variety of ready materials. The children themselves were described as being curious about words, having good memories and playing well by themselves. All of them were read to at an early age. Mothers played the major role in helping these early readers, but the fathers were very active in this capacity also.

EMERY, D. *Teach your preschooler to read.* New York: Simon and Schuster, 1975.

After knocking down several strawmen which he has dutifully set up, Emery traces the cause of America's reading problems to the home. He maintains that there is generally not enough input, but that with sufficient stimulation at the "teachable moment" (around age four), children will learn to read. The argument he posits is essentially a quantitative, 'assembly line' one. His solution to the problems in teaching reading rests largely on the amount of practice, the repetition provided within a set, linear notion of how reading is learnt. Emery maintains that by his/her questions, the four-year-old will show when he/she is ready to learn to read and that the appropriate one to do the teaching in such a case is the parent. His description of an environment conducive to preschool reading takes account of the main characteristics posited by Teale (1978). However, the program Emery recommends rests strongly on a quite rigidly preconceived decoding scope and sequence for reading which relies heavily

on repetition and reinforcement.

ENZMANN, A.M. A look at early reading. *The Reading Teacher*, 1971, 24 616-620.

In five pages Enzmann wanders in and out of issues related to the how and when of beginning reading. He maintains that schools should be prepared to offer children who are ready, a reading program at the kindergarten level. He cites some programs and materials which have been used at this level. His recommendations are that beginning reading instruction should be as meaningful and natural as possible and that the basal should not be considered the reading program. Enzmann superficially touches many, many bases in this article.

EVANS, J.L. Teaching reading by machine: A case history in early reading behaviour. *AV Communication Review*, 1965, 13, 303-308.

Evans' purpose is to "detail the reading behavior of one young child" over a period of two and one-half years (approximately ages three to five and one-half). The subject (KE) began reading instruction on a teaching machine. The instruction itself was phonics and was conducted over a period of four months (actual instruction time was five hours and forty-two minutes). The theory upon which the instruction was based was that a reader scans a phonetic word letter by letter, produces a sound equivalent of each letter and then synthesizes the word into its normal pronunciation (p.305). Following the machine/phonics phase of instruction, the child was started on "a new program designed to teach reading of non-phonic material" which consisted of reading basal readers to and with the author. Standardized testing at ages 3;11, 4;6, 5;0 and 5;6 show KE achieving average comprehension and word recognition scores of grades 3.0, 3.5 and 4.5 for the first three testings. (No comprehension test was given at age 5;6.)

FORESTER, A.D. What teachers can learn from 'natural readers'. *The Reading Teacher*, 1977, 31, 160-166.

The author reviews the research of Durkin, Torrey (1969) and others and cites her own classroom observations of early readers to note that there is a parallel between learning to read and learning to speak for natural readers. The following features of learning to read naturally are identified: (1) It is a process much like learning to speak; that is, reading is learnt as expressive meaningful language (not a set of rules). (2) Learning to read proceeds on the basis of language patterns with which the child is familiar. Thus, the child monitors and controls his/her own vocabulary. Forester characterizes the classroom where her observations took place as one which takes account of how natural readers learn to read. The author plans to continue observations in an attempt to pinpoint just how the process of learning to read evolves naturally.

FOWLER, W. Teaching a two-year-old to read: An experiment in early childhood learning. *Genetic Psychology Monographs*, 1962, 66, 181-283.

Fowler reports a case study of his attempts to teach his two-year-old daughter to read over a nine month period. His conception of the reading process and learning to read is heavily influenced by behavioural psychology. He argues that "The language structure should be carefully analyzed and the training broken down into small steps, paced in a shallow gradient which can be easily learned by the child" (p.192). Thus, the instruction proceeds in a linear additive fashion from the small (word) to the large (sentence), from what Fowler perceives as simple to what he sees as complex. The view of reading as a type of language process is not considered.

Fowler emphasizes that the methods of instruction always aimed to approximate play and to keep the child interested as much as possible. He stresses the importance of reinforcement and reward in the teaching. A whole word approach predominated from the beginning to the end of the instructional period. Words and sentences were presented on flash cards. Vocabulary was chosen according to structural simplicity, phonic factors, the child's interest and frequency of occurrence in language. Later in the program systematic phonics was introduced. Some reading of preprimers was also included. A description of these methods and the results of their application are spelled out in great detail in the article. Pre- and post-test data on reading achievement, intelligence and psychosocial development and functioning are also reported. Major findings were that the child made reasonable progress in reading single words, especially those introduced early in the nine month period and that some progress was made in reading short sentences (on individual cards) and texts. Fowler concludes that while it is apparent that a two-year-old child of high abilities can make considerable progress in reading, the amount of fluency and autonomy which can be achieved in reading texts is still in doubt. He maintains that a variety of methods proved effective in teaching a young child but that the importance of early, systematic phonics was not resolved.

FOWLER, W. Structural dimensions of the learning process in early reading. *Child Development*, 1964, 35, 1093-1104.

Fowler proposes a framework for defining, grading and teaching the dimensions of reading to young children. Basically his idea is that the larger system (reading) must first be broken into its component units and then units which lead to discrimination and identification of the system should be selected for teaching. Thus he holds that the act of reading can be analyzed hierarchically and instruction programmed along a continuum of complexity. Fowler sees reading as being comprised of three levels: (I) phoneme-grapheme correspondence, (II) patterning of morphemes into sentences (syntax) and (III) patterning of meanings (semantics). He maintains that the semantic level will take care of itself in reading and that the main task of the child is to learn the phoneme-grapheme correspondences, with work on the syntactic level (II) also being necessary. The program itself is composed of "problem solving tasks based on matching

principles" on the two levels. Unlike his earlier work (Fowler, 1962) phonics is now an integral part of instruction from the beginning. In Level I there are single words (e.g. cat) and graphemes (e.g. c, a, t). The child must match the components with the whole. With Level II this procedure is conducted with sentences (wholes) and words (parts). Fowler explains that these tasks require analysis and synthesis and explains the sequence upon which each of the levels is developed. He says that 30 preschool children have been involved in the programand that all have made progress in reading.

FOWLER, W. A study of process and method in three-year-old twins and triplets learning to read. *Genetic Psychology Monographs*, 1965, 72, 3-89.

Fowler describes an experiment in which 6 three-year-olds (one member of each pair of three identical twins, two members of a set of triplets, and Fowler's daughter) received 15-30 minutes of reading instruction 4-5 days per week for a 2½-5 month period. Four twin controls received no reading instruction. The program provided was a "systematic analytic - synthetic approach" basically the same as that outlined in Fowler (1964) but described here in much more detail. The program was characterized by (a) systematic and structured (phonic) presentation and (b) the use of play orientation. There were two levels included: (1) the phonic instruction followed by (2) a switch to commercial preprimers (because of the absence of prepared materials which followed Fowler's program). The philosophy behind the program is captured in this quote: "Learning to read ... is primarily a problem of acquiring familiarity with how language forms and structures are recorded. Meaning is felt therefore to present no special problems for learning to read a language ..." (p.30).

Results showed that 3 of the experimental group made good progress, advancing to and achieving at stage two of the program. The remaining 3 experimental children made "some progress" in learning individual words and phonic units, but none of them reached a point of reading even single, whole-sentence units independently. None of the control group showed any indications of the ability to read words, letters or sentences. Fowler concludes that there is "much evidence that supports the value of these methods and techniques for a reading program at the 3-year-old level" (p.87). In addition no signs of socioemotional difficulty were found for any of the children.

FOWLER, W. A developmental learning strategy for early reading in a laboratory nursey school. *Interchange*, 1971, 2, 106-125.

To study the effectiveness of Fowler's developmental learning program for teaching reading in a preschool institutional setting 109 children (age 3;3 to 4;11) with IQ's ranging from average to superior who attended an urban, university nursey school were selected for "intellectual competence and motivation potential for learning to read" (p.108). The program (administered 10-20 minutes daily) was

essentially phonics oriented and is described in detail in Fowler (1964, 1965). Post-tests of knowledge of phoneme-grapheme correspondence, word recognition, word generalization, sentence reading and paragraph reading were conducted. Results showed that regardless of the post-test measure, a large majority (74) of the 109 children learned to read with comparative ease, regularity and fluency, given the systematic program. Fowler attributes success to his analytic-synthetic matching tasks which "greatly facilitated children's learning of critical (phonic) rules upon which word and sentence structure are based" (p.120). The best predictor of success in learning to read for these preschool children was mental age, followed by knowledge of letter names and chronological age.

GARDNER, K. Early reading skills. In *Reading skills: Theory and practice*. London: Ward Lock Educational, 1970. Pp.18-23.

Gardner reports the results of a pilot study of the "home regime" of early readers. The major trends of the results suggest that early readers come from homes where the language forms favoured by education are used and where the child has maximum contact with adult speech. Whether or not parents decided to teach children to read was not important. Parents of early readers regularly read to their children. On many occasions the favourite story was used as a basis for investigating the written code.

GATES, A.I. & BOEKER, E. A study of initial stages in reading by preschool children. *Teachers College Record*, 1923, 24, 469-488.

The findings of this study of word learning with preschool children indicate: (1) length of word conditions difficulty of reading by inexperienced children, (2) names of objects judged to be of interest to children are not necessarily easier to learn, (3) words of irregular outline do not seem to be easier to learn than those which have letters of uniform height, (4) children frequently appear to learn words by observing some minute detail (dot over i or tail on y), (5) perceptual analysis (discovering distinctive features) of words is a main problem in beginning reading, (6) children improve rapidly in ability to learn words with practice, learning 175% as many words during the fifth day as on the first, (7) children remember words learnt over periods of from 24 to 96 hours rather better than many other studies of the time indicate.

GEORGIADY, N.P., ROMANO, L. & BARANOWSKI, A. To read or not to read — in kindergarten. *Elementary School Journal*, 1965, 65, 306-311.

This study sought to determine if children in a "changing environment" would mature more rapidly and hence be ready for earlier initial reading experiences. Each of four kindergarten classes (100 subjects, aged 5;9-6;3) was divided into four groups (experimental-control x high IQ-low IQ). The experimental children in each class received help from the teacher in identifying words. The criterion measure at the end of the experiment was word recognition. The experimental group generally achieved significantly higher on the post-test than the control group.

HARTY, K.F. *A comparative analysis of children who enter kindergarten reading and children of the same age who require additional readiness for reading.* Unpublished doctoral dissertation, The University of Wisconsin, 1975.

From all the kindergarten students in one midwestern American city 130 children who could read "four of five words in isolation and four words in (a) sentence were identified as 'readers'"(p.38), 130 were randomly selected from a readiness group and 130 were randomly selected from a non-readiness group. The 390 children were tested for language development, self-concept, auditory descrimination and reading achievement. Parents and teachers were each administered a questionnaire.

A significant difference among reader, readiness and non-readiness children was determined in the following areas: (1) language development, (2) auditory discrimination, (3) socio-economic level, (4) frequency of parent reading to child, (5) age when child started watching "Sesame Street", (6) if child attended a preschool, (7) visits to the public library, (8) teacher perceptions of their reading abilities.

Harty also found that (1) the largest number of readers learned to read at four years of age, (2) most early readers had been helped to learn to read by their parents, (3) most early readers learned the names and sounds of the alphabet before learning to read.

HIGGINS, W.L. A working bibliography for research relating to early reading. *Georgetown University Papers on Languages and linguistics,* 1976, No.13, 74-103.

Higgins' bibliography might be said to be more on the topic of beginning reading than on early reading (as the term defined for purposes of this annotated bibliography). This bibliography is not annotated.

HIRSCH, E.S. What are good responsive environments for young children? A critical discussion of O.K. Moore's theoretical formulations. *Young Children,* 1972, 28, 75-80.

Hirsch details the main principles underlying O.K. Moore's "Talking Typewriter" approach to the learning of writing/reading and speaking/listening. She maintains that the principles are important ones for learning but finds that Moore has omitted some equally important areas, notably those of the role of past experiences in learning and of maturational sequences and needs. She argues that Moore does not allow the learner to develop a learning style uniquely his/her own but is basically applying a reward-reinforcement principle. She concludes that any good learning environment must take into account Moore's principles (and those he has omitted) but that ultimately the good classroom is better than the computer environment.

HOLLINGWORTH, L.S. *Children above 180 I.Q.* Yonkers-on-Hudson, New York: World Book Company, 1942.

The author reviews the literature up to 1942 of studies of children over 180 I.Q. and presents 12 of her own cases studies. One phase of the study focuses on reading. In that section family background, preschool history, school history, character traits, physical and mental measurements, teachers' judgements and reading interests are investigated. Nine of the subjects were early readers with the median onset of reading being age three. The traits identified as being associated with early readers were as follows: (1) They were content to be alone, (2) they liked books to be read and reread to them and they read and reread them also, (3) they showed a general interest in words and (4) they liked to write.

HOSKISSON, K. Should parents teach their children to read? *Elementary English*, 1974, 51, 295-299.

Hoskisson reviews language learning studies of such people as Roger Brown, Susan Ervin and David McNeill and establishes that the child learning language is a *constructor* of language who learns language essentially by getting feedback in a communicative situation. He then argues that there is no need for formal, systematic instruction in reading but that learning to read can proceed much like learning to speak. In so far as parents are concerned he says, "Parents are in a more advantageous position to know what information their children have acquired and since meaning resides in the context of the situation as well as in the linguistic devices of expression, they are in a better position to help their children learn to speak, and by extension to learn to read" (p.297). The author has developed a program which follows from such a philosophy that parents can use to assist their children's reading and he details the steps involved.

HUEY, E.G. *The psychology and pedagogy of reading.* New York: The Macmillan Company, 1908.

In Chapter XVI of his book Huey discusses 'Learning to Read at Home'. He advocates what may generally be termed a language-experience approach whereby the parent makes great use of print which occurs in the environment in helping the young child learn to read. Huey maintains that meaning should always be central in this process. He also discusses children who "learn to read for themselves" and likens this way of learning to the manner in which oral language is learnt. He says that instruction in reading should attempt to replicate this natural learning style. Some of his quotable quotes on teaching young children to read in this manner: "The secret of it all lies in parents' reading aloud to and with the child" (p.332). "Of course there comes a time when phonics should be taught, and carefully taught, but that task may well be left to the school" (p.334). "As to choice of reading matter there is no better guide than the perennial interest of childhood itself ... " (p.334).

HUGHES, F. *Reading and writing before school.* London: Jonathan Cape, 1971.

Drawing almost exclusively upon the theory and practices of Doman (1964), Hughes puts forth a rationale and method for teaching pre-schoolers to read. The only divergence from the 'Doman line' is that Hughes advocates instruction in phonics in addition to Doman's suggestions. She outlines the scope and sequence of activities for teaching early reading and details "step by step" how she taught her two-year-old daughter to read. Also included are suggestions for teaching preschoolers to write and ideas on how Doman's principles might be applied to teaching classes of children in a school setting.

HYMES, J.L. More pressure for early reading. *Childhood Education,* 1963, 40, 34-35.

Hymes condemns the proposals put forth by Doman, Stevens & Orem (1963) on 'teaching your baby to read'. He discusses how their ideas disregard individual differences in children and argues that each child should be allowed to "come to" reading in his/her own time. Hymes warns that there may be serious effects on children if Doman, Stevens & Orem's methods are applied.

HYMES, J.L. Early reading is very risky business. In H.F. Clarizio, R.C. Craig & W.A. Mehrens (eds.). *Contemporary issues in educational psychology.* Boston: Allyn and Bacon, 1970. Pp. 135-139.

Hymes argues that there is nothing wrong with helping preschool children to get ready to read or with letting those who are ready read. But he maintains that the current (1965) drive for early reading is still basically a formal workbook/textbook approach and that such an approach is wrong because (1) it makes reading a sterile unintellectual act, (2) it isolates reading as a skill, (3) it turns a nursery or kindergarten in a 'sit-down' programme and (4) it runs the risk of making the child less emotionally healthy because of early emotional pressure.

HYMES, J.L. Teaching reading to the under-six age: A child development point of view. In M.P. Douglas (ed.). *34th Claremont Reading Conference Yearbook.* Claremont, California: Claremont Reading Conference, 1970. Pp. 79-83.

Hymes argues that it is nonsense to talk about teaching reading readiness as a special approach to pre-first grade children. He says, "We either teach reading or we don't" (p. 79). He opts for teaching reading to the under-six age child provided the following considerations are kept in mind: (1) reading must be taught in a way that fits the child, (2) reading must be taught in a way that fits reading and (3) reading must be taught in a way that fits the goals of general education. Hymes discusses each of these considerations in some detail.

ILG, F. The child from 3 to 8, with implications for reading. *Conference on Reading, University of Pittsburgh Report*, 1963, 19, 15-24.

Ilg relies heavily on the theories of Gesell and others like him who maintain that maturation is the key variable in determining instruction. Simply stated, this school of thought supports waiting until the child is ready; if the child is not ready, instruction should be delayed. In this article Ilg cites factors in the child's development that correlate with reading and provides developmental profiles of children at the different age levels (from three to eight) on various reading tasks (e.g. reading-related visual characteristics, word recognition abilities, listening to stories). The teacher is meant to watch for these behaviours in order to obtain an indication of what the mind is doing and thus be able to decide if reading instruction is or is not appropriate.

Interorganizational Committee. Reading and pre-first grade: A joint statement of concerns about present practices in pre-first grade reading instruction and recommendations for improvement. *Language Arts*, 1977, 59, 459-461.

The title adequately outlines the content of this statement. The concerns are directed mainly at structured (pre-) reading programs, the pressure for formal assessment of such programs and the need for the rationalization by teachers of preschool reading programs. The recommendations call for a language arts type approach to preschool reading with appropriate evaluation procedures and concern for the individual child.

JOCIĆ, M. Some psycholinguistic aspects of the acquisition of reading in early childhood. In K. Sornig (ed.), *Proceedings of the 4th International Congress of Applied Linguistics*. Stuttgard, 1975. Pp.369-378.

The author describes a one year experience aimed at teaching reading which involved 11 children who ranged in ages from 2;11 to 3;4 when the experiment began. Nine of these children were selected because they were tested by a psychologist, were found to be average and thus deemed representative of typical kindergarten children. However, what the children were average on is not reported. The bulk of the article is given to describing the reading program itself which was conducted three to five minutes daily in the initial phase of the experiment and gradually lengthened to five to twenty minutes daily. The program was essentially a whole word approach based on Doman's (1964) ideas. The 'tenor' of the experiment was that the teaching should be carried out through play without pressure on the children to participate.

Joicic reports the following results: (a) one child had "completely mastered the reading ability". (p.374), (b) four children were "reading well", but only words not longer than five letters, (c) two children were able to read only one syllable words of two or three

letters and (d) four children were able to recognize letters but not link them into words. From these results she concludes that the program was helpful in developing reading skills and that the cognitive development of one's speech must precede learning to read. It is somewhat difficult to see how this latter conclusion was arrived at considering the design of the experiment.

KASDON, L.M. Early reading background of some superior readers among college freshness. *Journal of Educational Research*, 1958, 52, 151-153.

Subjects involved in this study were all at or above the 97.5 percentile on the reading comprehension section of the Cooperative English Test. The method for gathering data was a "structured interview" with the subject which attempted to ascertain his/her preschool and early readers, and thus the study would seem to have relevance to this bibliography. This study has serious methodlogical flaws, however, and it is included only because of this bibliography is meant to be *comprehensive*.

Subjects gave more or less "off the top of the head" reports and did not consult parents, documents, etc. which could well have provided information about those readers' backgrounds. In addition, it seems quite questionable that research can arrive at any useful answers by asking a sample of nineteen-year-olds such things as "How did you learn to read?" Thus, the results and conclusions are not included here. This study does, however, provide some type of evidence that preschoolers can learn to read (for what that is worth).

KELLY, M.L. Reading in the kindergarten. In J.A. Figurel (ed.) *Reading and inquiry*. Newark, Delaware: International Reading Association, 1965. Pp.446-448.

Kelly outlines the broad principles of a Livermore, Californian kindergarten reading program which seeks to teach all interested and ready children to read. She also summarizes a study in which kindergarten children were categorized as high or low I.Q. and then randomly assigned to either an experimental group for reading instruction or a control group for readiness instruction for a period of one school year. Results on the California Reading Tests indicated that children in the experimental group surpassed those of the control group in reading scores, but there is no indication that the difference was significant.

KELLY, M.L. & CHEN, M.K. An experimental study of formal reading instruction at the kindergarten level. *The Journal of Educational Research*, 1967, 60, 224-229.

The authors report on a study in which 221 children were classified as high or low on reading readiness and intelligence variables and then randomly assisgned to either a traditional readiness program or to formal reading instruction for four months in an attempt to determine if reading instruction at the kindergarten level "would increase the children's reading skills and favourably dispose them toward reading activities and the school" (p.224). No description of either the readiness or reading programs is given. Results indicated that

subjects in the formal reading program excelled significantly in reading skills (global score from California Reading Test), but that attitudes toward school and reading habits, when measured by a teacher-reporting scale were not affected by the type of program. When measured by a self-reporting scale, children in the readiness program showed more favourable attitudes. However, all attitude measures employed appear to be highly suspect with little reliability or validity data to back them up.

KING, E.M. & FRIESEN, D.T. Children who read in kindergarten. *The Alberta Journal of Educational Research*, 1972, 18, 147-161.

In this study 31 early readers from Calgary, Canada's population of kindergarten children were identified. (Early readers were those scoring grade one level or higher on a standardized reading test and being identified by the teacher as able to read words, stories, or books not taught in class). Also, 31 non-early readers were randomly selected as a control group. The early readers and non-early readers were compared on the variables of family background, preschool experience and various perceptual and language-reading factors in the child.

Significant differences in family background: (1) mothers of early readers had greater educational attainment, (2) socio-economic index was higher for early readers, (3) early readers came from smaller families. Other findings of the study: early readers were significantly higher on measured intelligence. Along with intelligence, letter recognition, word recognition and rate of learning to read new words were the most powerful variables for distinguishing early readers from non-early readers.

Follow-up on both groups was conducted after one year of reading instruction. At that time the groups differed significantly in oral word reading, reading vocabulary and comprehension.

KRIPPNER, S. The boy who read at eighteen months. *Exceptional Children*, 1963, 30, 105-109.

In a perceptive manner Krippner reports a case study of an early reader, detailing the child's intellectual, socio-emotional and linguistic status as well as his early reading experiences. Krippner points out that the subject failed a reading readiness test but read at a grade two or three level. The author attributes the child's reading ability to (1) superior general intelligence, (2) superior visual memory, (3) superior listening vocabulary, (4) superior social maturity, (5) superior speech and hearing development (e.g. articulation and auditory discrimination), (6) superior range of interests and (7) superior home background (extensive cultural experiences, parents who served as reading models).

LADO, R. Early reading by a child with severe hearing loss as an aid to linguistic and intellectual development, *Georgetown University Papers on Languages and Linguistics*, 1972, No.6, 1-6.

Lado reports teaching a young child with severe hearing loss to speak and read. Reading instruction was begun when the child was 2;8. In general the lessons were conducted in a game-like fashion. An outline of the method is as follows:

(1) Lado taught the child about 100 words, most of which could be depicted in drawings.

(2) Words with a minimal sound contrast were taught.

(3) Two-word phrases were taught, first with appropriate drawings and then without drawings.

(4) 'Three-element' sentences were taught (e.g. The blue fish swims.).

(5) Letters of the alphabet taught via initial position in single words.

(6) A group of words within a concept were taught.

e.g. chair)
piano)
sofa) living room
lamp)

(7) Employed sentences which could be answered (e.g. "What is ...?', 'Where is ...?'"and partially illustrated ancedotes based on the child's experiences.

(8) The technique of reading and answering questions was employed.

At age 4;7 the child was not reading "freely" but had read some 500 words in 25 little books. Lado concludes that the achievement to date is definitely positive, despite the irregularity of the program.

LADO, R. Early reading as language development. *Georgetown University Papers on Language and Linguistics*, No.13, 1976, 8-15.

The author proposes that in order to get insight into the reading acquisition process, it must be considered as following a course parallel to and similar to that of language acquisition. He cites Doman (1964) and Söderbergh (1971) and maintains that breaking into reading will occur at the one-word stage, move to two-word construction and eventually into sentences. Some general discussion of the principles of teaching early reading and preschool biliteracy/bilingualism follows. Lado concludes with five recommendations for research needed into early reading/early bilingual reading. The author casts his nets widely but not very deeply.

LADO, R. Preschool biliteracy: Acquisition and learning in early reading. *Hispania*, 1977, 60, 533-535.

Lado draws a distinction between (1) acquisition — that part of mastering a language which occurs without conscious awareness — and

(2) language learning — that part of mastering a language which occurs when the child makes a conscious effort to remember a word, sound, rule, etc. He maintains that both acquisition and language learning are involved in the child's mastery of L_1.

Applying this distinction to early reading, he finds that Doman (1964) and Söderbergh (1971) use an acquisition model and that McKee, Brzeinski and Harrison (1966) use a learning model. Lado argues that the younger the child, the more there is of acquisition in the process; the older, the more there is of learning — but that in every case both are used. Teaching early reading for Lado is a matter of providing for acquisition and for learning. In the final section of the article Lado makes a case for beginning biliteracy for Spanish speaking American children in early childhood.

LEDSON, S. *Teach your child to read in 60 days.* New York: W.W. Norton, 1975.

Ledson cites his objections to the academic/educational approaching to reading and reading research being carried out in schools and details how he taught his two young (2;9 and 3;11) daughters to read. His method was essentially a synthetic phonic/quasi-*ita* approach which utilized operant conditioning, presenting the reading tasks in game-like situations and having tangible (edible) rewards. In diary/pseudo-novelistic form Ledson presents at great length the steps by which he taught his children. Subsequently he provides recommendations for other parents who want to teach their children to read in a short period of time.

LESIAK, J. Reading in kindergarten: What the research doesn't tell us. *The Reading Teacher*, 1978, 32, 135-138.

Lesiak maintains that research in early reading has shown that kindergarten children can and do learn to read but that the research does not indicate (a) which methods and materials are best, (b) how long instruction should be conducted, (c) how achievement should be measured, (d) if an early start in reading is beneficial in later grades, (e) what the social and emotional effects of early reading instruction are and (f) which children benefit most from early instruction. She recommends more studies focusing on these questions and in the meantime kindergarten reading instruction based on "a real consideration of individual differences" (p.137).

LYNN, R. Teaching two year olds to read. *Reading*, 1970, 4, 18-22.

Lynn gives a brief account of teaching his daughter letters and words between the ages of two and three and then addresses the question 'Is early reading possible?' and 'Is early reading useful?' To the former question he points out examples which show that early reading is possible and states that he feels the main difficulty for young children learning to read is one of concentration and attention span. On the other question of the usefulness of early reading Lynn doubts

that it has any long-lasting effect, either good or ban but fails to cite any evidence to support his case. Generally this article represents Lynn's subjective feelings about the subject of early reading.

MACKINNON, A.R. Exploration for instructional design and early reading programs. In W.G. Cutts (ed.) *Teaching young children to read.* Proceedings of a Conference, November 14-16, 1962. Washington, D.C.: U.S. Government Printing Office, 1964. Pp.93-96.

MacKinnon outlines the purpose of a two-year study of the speech and drawings of four- and five-year-old children. To determine how written and spoken symbols complement and reinforce one another, children were asked to draw and talk about their drawings. The author concluded that the drawings represented a form of abstract thinking and as children advanced in language, there was a parallel increase in abstract thinking demonstrated in their drawing. MacKinnon calls for these findings to be applied to the design of materials for the first steps in reading. He feels that such materials should start with familiar meanings expressed in letters, phrases and sentences together, but that these should be presented in a controlled way so that the child can discover the necessary relation without experiencing frustration. He suggests that control can be achieved by, for example, 'letter-by-letter' variations. The whole article is rather vague on the exact design and findings of the research study and on the nature and application of the materials he is proposing.

MASON, G.E. & PRATER, N.J. Early reading and reading instruction. *Elementary English,* 1966, 43, 483-488, 527.

The authors summarize the literature on early reading from the 1920's to the mid-1960's. The discussion is organized under the topics: (1) early reading without deliberate training, (2) early reading learnt with deliberate training, (3) children who entered school prior to age six compared with their older grademates and (4) reading readiness training.

The authors conclude that the question of when to begin teaching reading is unresolved but depends upon several variables such as the child's interest, instructional materials, class size, teacher expectancies. They also hint that readiness and beginning reading are not distinct phases but form a continuum in the development of learning to read. The article tends to be more of a compilation than a critical review.

† MAYFIELD, M.R. *Individualized reading instruction within an experimental preschool.* Unpublished doctoral dissertation, The University of Nebraska, 1969.

Thirty-two middle to upper-middle class preschool children were divided into two equal groups and matched on sex, chronological age and mental age. The experimental group received daily five-minute individualized reading which could be described as a language-experience approach and supplemental group reading instruction. The control group received only the group reading instruction. Pre- and post-test measures included (1) a 25 word, word recognition test, (2) "The Mother's Words", in

which each child's mother was asked to write 15 words she felt her child could read and (3) 20 words and sentences drawn from instructional content common to both groups. These measures yielded group differences favouring the experimental group, two of which (word recognition test and the 20 words/sentences) were statistically significant. Mayfield concludes that individualized approach is more effective than a group instructional approach (but it is difficult to justify this conclusion since the experimental children also received group instruction), and that the results provide additional evidence that preschool children can learn to read.

McCRACKEN, R.A. A two-year study of the reading achievement of children who were reading when they entered first grade. *The Journal of Educational Research*, 1966, 59, 207-210.

The author identified 8 early readers out of 360 children entering grade one in a New York school. He tested their reading achievement with The Stanford Achievement Tests and an informal reading inventory over a two-year period. The reading achievement scores for all children were well above average for both years. The children quickly mastered word-pronouncing skills and oral reading skills but at grade two 7 out of the 8 children failed to comprehend adequately materials for grades 4-6 on the informal reading inventory because of lack of background information.

McDOWELL, E.E. A review of learning principles applicable to preschool reading instruction. *Educational Technology*, 1971, 11, 67-72.

The author takes a firm behavioural psychology approach to reading in this article. He argues that transfer of training and operant conditioning principles are eminently suitable for teaching reading, and maintains that because preschool children can be taught to read, these principles should be applied to their reading instruction. The level of reading focused upon is esstentially that of the word. One must assume that the author considers the sentence and discourse levels as mere aggregate extensions of word reading. The author also discusses the efficacy of programmed instruction: while he quibbles with particulars of various cueing techniques and unit sizes, he certainly believes that this general type of instruction takes account of the important principles in learning to read.

McKEE, P., BRZEINSKI, J.E. & HARRISON, M.L. *The effectiveness of teaching reading in kindergarten.* Cooperative Research Project No. 5-0371. Denver Public Schools and Colorado State Department of Education, 1966.

This report provides details on the Denver Project which sought to determine the efficiency of beginning the systematic teaching of reading in the kindergarten. The 4000 students who entered the Denver kindergarten classes in 1960 served as subjects during the

six years of the project. Each child participated in one of the following four groups during the research:

Group I - The Control Group
Regular program in kindergarten
Regular program in the first and later grades

Group II - The Delayed Experimental Group
Regular program in kindergarten
Experimental program in early first grade
Adjusted program in the first and later grades

Group III - The Short-Term Experimental Group
Experimental program in kindergarten
Regular program in the first and later grades

Group IV - The Full-Term Experimental Group
Experimental program in kindergarten
Adjusted program in the first and later grades

The *regular program* was "similar to those programs suggested in teachers' manuals of most basal texts." The "adjusted program" in kindergarten consisted of daily, supplementary, twenty minute sessions of "planned, sequential instruction" in using simultaneously the context of what was being read and a limited number of phonic clues. In grades one through five children in the adjusted program received instruction aimed at providing them with "a basic technique for identifying strange words encountered in their independent reading." The grades one through five phase of the adjusted program attempted to take account of the experimental group's earlier start in reading.
The relative achievement in reading of the four groups is shown below:

Achievement	End of Grades 1	2	3	4	5
Highest	Group IV (Full-term)	Group IV	Group IV	Group IV	Group IV
	Group III (Short-term)	Group II	Group II	Group II	Group II
	Group II (Delayed)				
Lowest	Group I (Control)	Groups III & I	Groups III & I	Groups III & I	Groups III & I

Major findings of the Denver Study were:

1. The basic skills of reading emphasized in the experimental program can be taught effectively to large numbers of typical kindergarten children.
2. Optimum reading achievement occurred with a full-term adjusted program.

3. The time of introduction of beginning reading activities had a significant effect on achievement.

4. The permanence of gains in reading during the kindergarten year depended upon subsequent instruction.

5. No evidence was found that the experimental early instruction in beginning reading affect visual acuity, created emotional difficulties or caused dislike for reading.
(See Mood (1967) for a critique fo this study).

† MONTES, F. *Incidental teaching of beginning reading in a day care centre*. Unpublished doctoral dissertation, Univeristy of Kansas, 1974.

The author attempted to develop a methodology by which incidental teaching episodes could be used to teach reading to preschool children (ages and number of subjects not given in abstract). Each time a child requested some play material, he/she was required initially to match and subsequently to identify the first letter or name of the requested item. "Weekly tests showed dramatic increases in the children's ability to identify letters". Montes concludes that incidental teaching can be useful for improving children's reading skills. This concept of reading seems a narrow one; the abstract reports no information on the reading of words/sentences, but it may merely be the abstract which is at fault. Final judgment as to the value of this study must be reserved until the complete dissertation can be consulted.

MOOD, D.W. Reading in kindergarten? A critique of the Denver Study. *Educational Leadership*, 1967, 24, 399-403.

Mood suggests that the results of the Denver Study on kindergarten reading (McKee, Brzeinski & Harrison, 1966) be viewed with caution because of the following methodological flaws:

(1) In the study at least two independent variables - method and material - were manipulated, thus making it impossible attribute the superior achievement results of the experimental group to the method as the authors do.

(2) The test used to measure kindergarten achievement corresponded to the program to which the experimental groups was exposed. The experimental group's superior performance may have resulted from their having an "appropriate 'response set'".

(3) The study began with 1250 subjects in the experimental group and 750 subjects on the control group. When the experimental was over, numbers had dropped to 759 and 225 respectively. These losses of 39 percent (experimental) and 70 percent (control) may easily have affected the randomness of the sample. No account is taken of this fact in the analysis.

(4) The data are presented in incomplete and inconsistent ways. She concludes that 'consumer' of this educational research must beware.

MOORE, O.K. & ANDERSON, A.R. The responsive envirnoments project. In R.D. Hess & R.M. Bear (eds.) *Early education: Current theory, research and action*, Chicago: Aldine Publishing Company, 1968. Pp.171-189.

The authors provide a brief description of the Responsive Environments Project, one facet of which aims to teach preschool children to read. The project was a "talking typewriter" which either provides the name and/or phonetic value of letter(s), word, sentence or paragraph which the child types in or, on the other hand, speaks a phonetic value of word, sentence or paragraph for which the child must type the appropriate letter(s). Thus, the talking typewriter could give or take dictation (with or without projections onto its screen), and it could be programmed to respond in a variety of ways to the child. In attempting to teach a child to read, one would program a sequence of steps which would lead the child to 'crack the code'. Moore and Anderson maintain that the younger the child starts to learn with the talking typewriter, the better.

MORRISON, C., HARRIS, A.J. & AVERBACH, I.T. The reading performance of disadvantaged early and non-early readers from grades one through three. *The Journal of Educational Research*, 1971, 65, 23-26.

The authors identified 58 black children entering first grade in New York public schools who had some word recognition ability (five percent of the total population) and compared them with non-early readers, both matched and unmatched, in order to determine the advantages or disadvantages of early reading ability among disadvantaged black children. Post-test comparisons were made at the end of each of the first three grades. Ath the end of grade one early readers scored significantly higher than the total group on all reading sub-tests of the Stanford Primary Achievement Test. The early readers were significantly superior to the total group at the end of grade two (Word knowledge, word discrimination, and reading) and moved even further ahead by the end of grade three. The consistent superiority of the early readers was found to be independent of the method of reading instruction. The authors conclude that reading skills learnt prior to grade one are not detrimental to long-range reading achievement of disadvantaged black children.

MOSKOWITZ, S. Should we teach reading in the kindergarten? *Elementary English*, 1965, 42, 798-804.

Moskowitz reviews the research of O.K. Moore, Dolores Durkin, Plessas & Oakes, Marjorie Sutton and the Denver Project (see Brzeinski, 1964a) and concludes that it is clear that preschool children can learn to read. However, she cautions against teaching young children to read maintaining that there is little to gain by pushing such children, but plenty to lose. Of the research which she cites to support her contention for not hurrying children, most is obscure, unreferenced work or poorly designed studies (e.g. Morphett & Washburn's 'classic' reading readiness study). Overall, it is difficult to pin down her stance. She seems to take a hard line agains pre-first grade instruction in reading but also supports instructing those children who are ready.

MOUNTAIN, L. How parents are teaching their preschoolers to read. ERIC Document No. ED 113 695, 1974.

Mountain outlines a collection of methods and materials parents can use in teaching their preschoolers to read. There is little coherent rationale or overall direction to his suggestions; they appear to be things that have worked at various times in various situations. The tenor of the article is caputred in the following: "If you find yourself getting nowhere (with word cards) after a week or two of one-minute sessions, you might want to try phonic games instead" (p.3) or, he then suggests, wait a while before going ahead with reading instruction. The methods and materials advocated by Mountain are (1) word cards, (2) stories about the child (and his environment, friends, etc.) written by the parent and (3) phonics games. A description of the creation and use of each is provided.

MOYNE, L. An individual study of reading acceleration of two kindergarten children. *Elementary English*, 1963, 40, 406-408, 442.

The author found two kindergarten children who were early readers and adjusted the traditional readiness program so that they would not be held back. She found they coped quite well emotionally and concluded that (1) individual differences should be recognized and (2) children who are ready should be permitted to read and move ahead in kindergarten.

NIEDERMEYER, F.C. Parents teach kindergarten reading at home. *Elementary School Journal*, 1970, 70, 438-445.

In the first part of this article Niedermeyer outlines the Parent Assisted Learning Program (PALP, a part of the Southwest Regional Laboratory Kindergarten Reading Curriculum). Through highly programmed instruction parents learn how to teach their children to recognize 90 one-syllable words and to master certain beginning consonant and end vowel-consonant sounds which would then be employed in sounding out new words. The author then goes on to report results of a study which compared children in the program with those not in the program on their achievement with respect to the program's objectives. The children in the program did significantly better. Niedermeyer concluded that a carefully developed program of school-related home instruction can elicit high levels of parent participation and pupil learning.

The amount of actual parent teaching vis-á-vis pupil achievement is not examined. More importantly, the study is quite 'hermetically sealed'. Nowhere does the author examine the value of the objectives of the program in the larger context of learning to read.

OLLILA, L.O. Pros and cons of teaching reading to four- and five-year-olds. In R.C. Aukerman (ed.). *Some persistent questions on beginning reading*. Newark, Delaware: International Reading Association, 1972. Pp.53-61.

Ollila maintains that the questions for early reading no longer include 'can they?' (for they obviously can) but should focus on such things as 'why should they?' 'what are the benefits?' and to whom should early instruction be given?' He summarizes the arguments for and against early reading and, using research evidence, discusses the effects of early reading. Ollila also discusses the problems encountered in teaching reading in kindergarten (e.g. inadequate teacher preparation, the degree to which kindergarten can organize reading instruction to cope with individual differences).

He maintains that the pro's and con's will not be resolved until more facts are found through research. His main conclusions, tentative in nature, are: (1) the indication is that early starters maintain an advantage in reading if adjusted instruction is provided, (2) attitudes of kindergartners toward reading is important in determining if instruction is to be given (3) little is known about the effects of early reading on eyesight and (4) early reading seems neither to create nor prevent reading disabilities, boredom or school adjustment/psychological problems.

PAST, K.E.C. A case study of preschool reading and speaking acquisition in two languages. *Georgetown University Papers on Languages and Linguistics*, No. 13, 1976, 58-73.

The author descirbes a two year experiment in preschool biliteracy in which a girl was exposed to English and Spanish from age 1;11. At 4;1 she was reading fluently at a first or second grade level in both languages. Briefly describes her language and reading lesson from the time she first showed an interest in looking at picture books. The method of teaching reading was that described by Doman (1964). Later the wide reading of books was encouraged. For a more detailed description of this experiment see Past (1975).

PFLAUM, S.W. *The development of language and reading in the young child.* Columbus, Ohio: Charles E. Merrill Publishing Company, 1974.

Chapter 8 of this book is titled 'Beginning Readers and Beginning Reading". In it Pflaum has a section on 'Early Reading and Early Readers' in which she reviews American studies in early reading - essentially Durkin's work and the Denver Project (Brzeinski, 1964a,b). She concludes that early reading is "still a somewhat controversial topic" but feels that it is generally accepted that early reading is not harmful. She maintains that if preschool children want to read, they should be helped to do so.

PINCUS, M. & MORGENSTERN, F. Should children be taught to read earlier? *The Reading Teacher*, 1964, 18, 37-42.

Based largely on the results of Durkin's early work and to some extent Bruner's notions in *The Process of Education*, the authors conclude that *some* children should be taught to read before grade one and that kindergarten and grade one curricula should adjust for early readers.

PINES, M. How three year olds teach themselves to read and love it. *Harpers Magazine*, 1963 (May), 58-64.

The author describes how preschool children receive reading instruction from O.K. Moore's "talking typewriter" and his Responsive Environments project. The article is generally chatty and anecdotal, and the author is very positive about Moore's work.

PLESSAS, G.P. & OAKES, C.R. Prereading experiences of selected early readers. *The Reading Teacher*, 1964, 17, 241-245.

The purpose of this study was to explore the experiences relating to reading development of 20 early readers. The authors hoped to identify the nature of prereading activities that might be associated with early success in reading. A questionnaire was given to parents of the early readers. Major findings indicated that the average intelligence of this group of early readers was superior (the range of IQ's was not given), that the early readers demonstrated an early personal interest in reading and writing, and that the parents maintained that most of these children were taught to read at home. The main environmental factors in the early readers' backgrounds were the many activities related to reading which were available and conducted in the home and the fact that 19 of the 20 children were read to regularly by parents.

POWERS, D.E. An evaluation of the New Approach Method. Final report. Princeton, New Jersey: Educational Testing Service. ERIC Document ED 120 264, 1973.

This study focused primarily on evaluating the most effective condition for conducting the New Approach Method of teaching preschoolers to read. (See Simms, 1976 and Simms & Simms, 1970 for a description of NAM.) Also investigated, however, was the effectiveness per se of the program. The lessons were given to 246 children (aged just under three to six) in one of three conditions: (1) in a NAM Mini-Center (by staff), (2) in the children's homes (by parents), (3) in a day-care Center. Pre-test data on achievement and attitude were collected on 177 children. Attrition for various reasons resulted in having post-tests on only 70 subjects. Analysis revealed little variation in achievement and attitudes among the three conditions. Of the 92 children who attended the day-care center, 42 were randomly assigned to NAM and 50 served as a control group in an attempt to assess the effectiveness of NAM. Pre- and post-test data were gathered, but at the end of the experiment such data were available on only 27 NAM and 25 control children. Results on these children indicated superiority in letter identification, word recognition, word identification, various phonics measures and sight vocabulary for the NAM group. Each group had a different teacher, however. Powers points out though that there was little actual instruction in the day-care center activities. No attitude changes were discernable in any of the analyses. Any conclusions as to the efficiacy of the NAM must certainly be viewed with extreme caution because of small sample sizes and the difficult experimental conditions which resulted in the loss of large numbers of subjects.

PRICE, E.H. How thirty-seven gifted children learned to read. *The Reading Teacher*, 1976, 30, 44-48.

Price used a parental questionnaire to examine the preschool experiences of 37 fourth, fifth and sixth gifted graders in an exceptional child programme at one American school. Twenty-eight of the children were early readers, and all but one were reading shortly after entering grade one. The relative percentages of early readers who learned to read incidentally versus being taught systematically cannot be determined exactly because of the manner in which data are reported. However, it can be said that the majority of these early readers learned to read incidentally. Also almost every early reader was regularly read to at home. Price also examined the ages at which the 37 children first walked and spoke, the methods used to teach them in school, the size of their families, the position of the child in the family and other anecdotal data on language and reading; however, further specific conclusions about early readers cannot be made because of the way the results are presented.

ROBERTS, H.E. Don't teach them to read. *Elementary English*, 1970, 47, 638-640.

Roberts recommends teaching reading in formal and informal ways to Black American children as soon as the child is ready. He maintains that the preschool years would be optimum years for most of these children. He outlines a proposed program for doing so, which is essentially a language-experience approach which builds upon the child's Black American language and culture.

ROWAN, H. ... 'Tis time he should begin to read. *Carnegie Corporation of New York Quarterly*, 1961, 9, 1-3.

In an editorial Rowan outlines the philosophy and method of O.K. Moore's "responsive environment" talking typewriter project. Rowan suggests that this study merits attention and may eventually lead to the resolution of many problems encountered in the teaching of reading in schools.

SAKAMOTO, T. Preschool reading in Japan. *The Reading Teacher*, 1975, 29, 240-244.

The author maintains that most Japanese children begin reading at home at age four without any formal readiness or reading instruction. He cites parents' willingness to participate with their children in reading activities as the main reason for this early reading. He includes a discussion of the nature of the Hiragana and Kanji characters and the extent of preschool children's reading of them.

SHELDON, W.D. Teaching the very young to read. *The Reading Teacher*, 1962, 16, 163-169.

Sheldon reviews the major research and practice in early reading and concludes that while it is obvious that young children can learn to

read, the evidence about long-term effects and desirability of early teaching of reading is inconclusive. He recommends that any reading instruction available in the kindergarten should be informal and that reading per se should not be introduced into the kindergarten curriculum.

SHELDON, W.D. Should the very young be taught to read? *NEA Journal*, 1963, 52, 20-24.

Sheldon maintains that not enough is known about the effects of teaching reading to preschool children to ensure that undesirable physical or emotional effects will not result. Basically he recommends allowing "a four- or five-year-old to read only when he demands a chance to learn" (p.22) but not deliberately setting up formal, systematic instruction in reading for preschool children.

SILBERBERG, N.E. & SILBERBERG, M.C. Hyperlexia: Specific word recognition skills in young children. *Exception Children*, 1967, 34, 41-42.

The authors describe cases of hyperlexia where word recognition skills are far in advance of and thus seemingly not tied to general verbal functioning. They mention that some of these children develop their word recognition skills at preschool age. They suggest that there is little known about this phenomenon, and that the area is one which needs research.

SIMMS, G. Teaching reading: Don't wait till you're ready. *Day Care and Early Education*, 1976, 3, 8-9, 45.

This article is essentially a rave on the New Approach Method of Pre-Reading and Reading Program (NAM) written by one of the authors of NAM. The contention is that preschoolers should be taught to read when they are ready, not when adults are ready to teach them. Simms says that about a thousand children have been through the NAM program and claims that all have learned to read in the preschool years. The only description of the program is that it is a series of games and fun activities which are recorded by the parent. The child plays the recording and "actually plays himself to the skill" (p.9). No other information about the program or the children who have been taught it is provided.

SIMMS, G. & SIMMS, P. *The New Approach Method*. Trenton, New Jersey: NAM Child Development Center, 1970, ERIC Document ED 106 810.

This publication is a guide for implementing the New Approach Method, a program for teaching preschool children to read. The program itself is a series of 84 gamelike lessons which rely heavily on phonics. The idea of the program is that the child's learning partner (teacher, parent, etc.) tapes each of the lessons, which the child then works

through on his/her own. Prereading skills such as colour recognition, spatial relations, shapes, and cardinal and ordinal number concepts are covered within the first 36 lessons. The remaining lessons focus on "reading skills": identification and printing of letters, consonant and vowel sounds, word families, and sight word recognition. See Powers (1973) for an evaluation of this program.

SIPAY, E.R. The effect of prenatal instruction on reading achievement. *Elementary English*, 1965, 42, 431-432.

Sipay describes a twelve-year longitudinal experiment with 112 mothers in their fourth month of pregnancy who were divided into three matched groups. One group gave their unborn children basal reader instruction, one phonics instruction only and the final group repeated nonsense syllables. Lessons were placed on tapes and transmitted to the unborn by a specially designed fetoscope. After the children were six years old and in first grade, they were given standardized reading tests each year from grade one through grade six. The children who had prenatal instruction in reading did significantly better on the tests than those who did not. The author's conclusion: "Nimium celeriter ne credas omnia quae legas". (Translation: Don't be too quick to believe everything you read. Moral: Perhaps we had better cast a critical eye at research in early reading (or any aspect of reading) and attempt to find out just what is substantiated by careful, theoretically sound investigations into the topic).

SMETHURST, W. *Teaching young children to read at home*. New York: McGraw-Hill, 1975.

Smethurst blends the scholarly and the chatty in his book intended "for parents who are considering teaching their children to read and who want to find out more about it" (p.5). He devotes a chapter to discussing the history of teaching young children to read at home and one to reviewing American research conducted on early readers who are instructed outside schools. Smethurst's conclusions about preschool reading are that young children can be taught to read at home by parents and that such teaching is more likely to be helpful than to result in harmful effects. He recommends that parents attempting to teach young children to read at home should ensure that the teaching involves no pressure or 'pushing" of any sort. He also maintains that the motivation for teaching one's child to read should be the interest shown by both parties, not the feeling that early reading will provide some later academic advantage: "If it (teaching the child to read) is not fun (for both you and your child), you shouldn't do it" (p.8). Smethurst outlines three general "paths" to early reading — the informal, the direct teaching/code emphasis, and the direct teaching/meaning emphasis — and presents a detailed, step-by-step description of his recommended program for teaching children to read at home, a program which is a systematic, direct teaching/code emphasis approach. Also included in the book are a buyer's guide to materials for home instruction in reading and a reading test for parent teachers.

SMITH, N.B. Early reading: Viewpoints. *Childhood Education*, 1965, 42, 229-232, 241.

Smith makes a distinction between teaching pre-grade one children to read and allowing those children who are ready/want to, the opportunity to learn to read. She maintains that the global decision to teach young children to read results from an over-simplified concept of the reading process and total disregard for individual differences. She cites research evidence to support her position that the early teaching of reading does not necessarily result in higher achievement. However, she fully supports and provides research evidence which supports allowing young children to read if they are ready.

SÖDERBERGH, R. *Reading in early childhood: A linguistic study of a Swedish preschool child's gradual acquisition of reading ability.* Stockholm: Almqvist and Wiksell, 1971.

Söderbergh bases her "linguistic study of a preschool child's gradual acquisition of reading ability" on the premise that a child can learn to read at the same age and in the same way that he/she learns to speak. She details how, from September 1965 to December 1966, she taught her daughter aged 2;4 (1965) to read based on this premise. The method Söderbergh used was essentially that espoused by Doman (1964). She found that in one year and two months her daughter had "broken the code" of written language on her own. During the fourteen months of the experiment she took detailed notes on her daughter's strategies for accomplishing this task, and the results are presented in this volume.

Söderbergh suggests that between the ages of two and four the child "may have an extraordinary capacity for absorbing and analysing language, a capacity that makes breaking of the code a natural and easy thing" (p. 121). Recognizing that her results are at odds with Chall's findings that a code emphasis approach to teaching reading in school was superior to a meaning emphasis approach (like Doman's), Söderbergh proposes that the older the learner, the more he/she may favour a code emphasis approach; the younger the learner, the more he/she may be able to discover the code him/herself.

SÖDERBERGH, R. Reading and stages of language acquisition. Paper presented at the IXth International Congress of Anthropological and Ethnological Sciences, Chicago, Spetember 1973.

In this paper Söderbergh argues that young children learn spoken language simply by being exposed to it and that children can learn to read in a similar fashion if the reading material presented follows roughly the stages by which children normally acquire spoken language. She emphasizes two characteristics of these stages. First, there is a development in sentence length: children begin by using a single word which has the function of a sentence, move to two-word sentences and then to three-word sentences. Also, the words used initially are concrete substantives, verbs denoting visible actions, or deictics (this, there, etc.). Gradually, determiners, adjectives, plural endings, etc. appear.

Söderbergh describes Doman's (1964) method for teaching young children to read and maintains that it is well-suited to the idea of the child's learning to read as he/she learned to speak if the steps which Doman outlines are matched to the child's developing stages of language acquisition. She notes that if a child has already reached a more mature linguistic stage when instruction is begun, the sequence should still be followed but that it should be moved through more rapidly and words should be combined into sentences as quickly as possible. Söderbergh emphasizes that no matter what material is presented to the child, it must be meaningful; it must "tell the child something" (p.16) and be related to his/her experiential-cultural background.

SÖDERBERGH, R. Learning to read between two and five: Some observations on normal hearing and deaf children. *Georgetown University Papers on Languages and Linguistics*, 1976, Number 13, 35-57.

Söderbergh reports the results of the case studies of the progress of 10 preschool children (3 normal hearing, 5 severely hearing impared, 2 totally deaf) in learning to read Swedish at home. Included among the case studies is that of the author's daughter, reported in more detail in Söderbergh (1971). The other two normal hearing children were taught to read using materials Söderbergh constructed as a result of her experiences with her daughter. The hearing impaired and deaf children were taught initially with these materials, but techniques were soon modified to suit the children better. The materials consist of 208 reading cards (with accompanying instructions) based on principles outlined by Doman (1964) and Söderbergh (1973). The author summarizes details on the reading development of the children under the following headings: (1) Reading Single Words, (2) Reading Sentences and (3) Reading Stories.

SÖDERBERGH, R. Learning to read: Breaking the code or acquiring functional literacy. *Georgetown University Paper on Language and Linguistics*, 1976, Number 13, 16-34.

Using reading diaries kept for 10 preschool children in her earlier case studies (Söderbergh, 1971, 1976a), Söderbergh attempts to draw out evidence to support her contention that it is possible for a child to acquire a "functioning written language" of his/her own in the same way and at the same age that he/she acquires spoken language, even though the child may not recognize the relations (phoneme-grapheme correspondences) between the spoken and the written." She cites details of cases in which children taught with a whole word/Doman-type approach that followed her conception of the stages by which children acquire spoken language (Söderbergh, 1973), learned to read words and sentences and later "cracked the code" by themselves. She argues that the hearing impaired and deaf children in her studies went through a similar process when allowed to learn to ready by this method.

SOUTHGATE, V. Early reading. In J.M. Morris (ed.) *The first R: Yesterday, today and tomorrow.* London: Ward Lock Educational, 1972. Pp.24-35.

In a reasoned and reasonable manner Southgate makes a case for early reading. She first outlines twelve arguments against early reading: eight of which maintain that young children cannot learn to read and four which show why they should not. Southgate responds to eight 'can not's' showing that children can. Her replies to the 'should not's' are also set out, and Southgate concludes that if children want to learn to read, are interested and can do so, then they should be allowed to read.

STEINBERG, D.D. & STEINBERG, M.T. Reading before speaking. *Visible Language*, 1975, 9, 197-224.

The authors report on their teaching a young child (male) to read silently before reading aloud, thus working on the assumption that speech production is not a necessary or desirable basis for teaching reading. The teaching programme, consisting of (1) alphabet familiarization, (2) alphabet identification, (3) word, phrase and sentence identification and (4) text reading, was begun when the child (K) was 6 months of age and was terminated four years later. Details of the programme are as follows: *Alphabet familiarization* (begun at age six months) - The purpose of this phase was to familiarize the child with the shape of the letter. No attempt was made to teach the 'sounds'.
Alphabet identification (begun at age 8 months) - The purpose here was to get the child discriminating letters visually. The authors should have K point to the appropriate letter when the asked, for example, "Where is V?"
Word, phrase and sentence identification (begun at age 10 months) - If K could understand the meaning of a word, phrase or sentence spoken to him, he was considered ready to learn its orthographic representation. The authors would, for example, present the written sentence "Where is the car?" or "Shall we go bye-bye?" and K would point to the appropriate object or rush to the door. K never 'said the sentences'; the objective was always to establish a direct connection between print and meaning.
Text Reading (begun at age 33 months) - For this phase K read various types of books. To introduce a new book, the authors would generally read the entire text aloud to K, commenting on and asking questions about it. After that various types of support were provided as K attempted to read it aloud.

Various testing was conducted during the experiment. At age 3½ years K read short sentences fluently, and by 8 his comprehension level was approximately grade 6 or 7 and his speed and accuracy grade 11. The authors present a wide range of data on K's development. They also examine critically Doman's (1964) notions of teaching early reading in light of their findings. To establish the generalizability of this approach the authors report results on its application to a mongoloid child who experienced "significant success" in reading, being able to read 48 words and 5 phrases and sentences. Steinberg and Steinberg conclude that "most current notions on reading readiness and on the role of speech production in teaching methodology require reconsideration" (p.197).

STEVENS, G.L. & OREM, R.C. *The case for early reading.* St. Louis: Warren H. Green, Inc., 1968.

This book is essentially a rationale for preschool reading. The authors argue that early childhood is a critical period for intellectual growth, especially for learning language. They extend this argument in like fashion to include learning to read. They point out that reading and speaking are the same processes; it is just that they are conducted in different media. Reading, for them, is basically a matter of perception: children need perceptual stimulation at the proper time of life to imprint on the brain the complex forms of graphic language. Teaching reading, then, is a matter of having parents and others capitalize upon these sensitive periods by providing large print sight words repeated in a meaningful way (with an obvious relation between the word and object named).

SUTTON, M.H. Listen to the little ones. *Elementary School Journal,* 1964, 64, 297-300.

In this article Sutton argues for teaching reading in kindergarten to those children who are ready and interested. She maintains that the way to proceed in teaching reading in kindergarten is to provide books and other reading materials and let those children who will, work from there.

SUTTON, M.H. Readiness for reading at the kindergarten level. *The Reading Teacher,* 1964, 17, 234-240.

A screening of 134 kindergarten children on visual and auditory perception abilities indicated that, on those dimensions, 132 of them were ready to read. Therefore, the author implemented "informal" reading instruction in the kindergarten whereby if a child sought instruction, he/she received 10-15 minutes per day. During the school year 46 of the children actually began reading. The following data were collected on these 46 early readers: (a) Socio-economic status - The only pattern to develop was a lack of a pattern, i.e. there was a wide range of SES in their backgrounds.
(b) Family background - Also characterized by variety. There was, however, a tendency for more early readers to be in the habit of asking questions about words, etc. and slightly more reading children had adults reading to them regularly.
(c) Readers' characteristics - The readers were classed by parents as being more conscientious and more able to concentrate.

SUTTON, M.H. First grade children who learned to read in kindergarten. *The Reading Teacher,* 1965, 19, 192-196.

The study is a follow-up on Sutton (1964b). It addresses the question, 'Do the differences found in the kindergarten year persist in grade one?' Of the 46 kindergarten readers 25 were put in a 'high level homogeneous' group in grade one and 21 in various 'heterogeneous' groups. Those readers in the high level homogeneous group

made good gains in semester one; those in heterogeneous groups did not. In semester two the gains were about the same. Thus, at the end of the year the reading achievement of kindergarten readers in the high level homogeneous group was significantly higher. Interesting was the fact that kindergarten non-readers who were placed in the high level heterogeneous group did better on average and range of achievement than the kindergarten readers who were placed in the hetergeneous group. Sutton does not go into detail on how much adjustment/individualization was provided for kindergarten readers in the heterogeneous classes, but one must assume that there was very little. Sutton makes no such statement but these findings seem to presage Durkin's (1974) conclusions that if the school does not adjust and provide appropriate instruction for early readers, their gains will not be maintained.

SUTTON, M.L. Children who learned to read in kindergarten: A longitudinal study. *The Reading Teacher*, 1969, 22, 595-602, 683.

This study also follows up the 46 kindergarten readers of the author's 1964 study. It reviews the results of the kindergarten and first grade achievement of the children presented in Sutton (1964b, 1965) and reports on their progress in grades two and three. The 46 early readers maintained "a continuing and increasing advantage" over their fellow students throughout the first three grades, but Sutton does not report whether these advantages were statistically significant or not. Sutton also reports parents' reactions to the early reading program and gives brief summaries of some of the early readers' learning patterns.

TEALE, W.H. Positive environments for learning to read: What studies of early readers tell us. *Language Arts*, 1978, 55, 922-932.

The author reviews the literature on early reading in order to arrive at conclusions as to what constitutes positive environments for learning to read, both in the home and at school. Teale identifies the following four factors as being repeatedly associated with the environments of early readers: (1) an availability and range of printed materials, (2) reading is 'done' in the environment, (3) contact with paper and pencil and (4) individual(s) in the environment respond to what the child is trying to do. Each factor is discussed in some detail. Also provided is a general description of a positive environment for learning to read.

TEALE, W.H. & JEFFRIES, L.E. Early reading: A selected annotated bibliography. Mimeo, La Trobe University, 1979.

The authors annotate the major studies about children who learned to read prior to receiving school instruction in reading. The authors compile the studies under the following topics: (1) Comprehensive Studies of Early Readers, (2) Theoretical and Pedagogical Issues in Early Reading, (3) Empirical Issues in Early Reading, (4) Reviews of Early Reading and (5) Bibliographies of Early Reading.

TERMAN, L.M. An experiment in infant education. *Journal of Applied Psychology*, 1918, 2, 219-228.

Terman introduces a case study written by the father of early reader 'Martha'. The father describes his method for teaching Martha to read. First he taught her the capital letters, then the small. The words in a picture book were taught and then the words were put on cards so that games could be played with them and with the letters. The father also created a primer for Martha using pictures, captions and sentences. At 21 months Martha got the insight of the relationship between print and meaning and gradually the pictures became less important to her than the print. At 23 months Martha began to "experience the mental pleasure of reading" (p.225). She knew 200+ words by sight at 24 months and 700+ at 26 months. Throughout the article both Terman and the father seem mainly to be interested in the extent to which environment influence mental growth-ability.

TERMAN, L.M. *Genetic studies of genius*. Stanford, California: Stanford University Press, Volume I, 1925; Volume II, 1926.

Volume I:

Terman identifies 643 subjects who were "well within the top one per cent of the school population" (p.19). The criterion for selection into the study was primary intelligence, but Terman also considered school achievement, age/grade status and teachers' ratings. He provides information on virtually every characteristic of the subjects which could give insight into their genius (e.g. history, social origin, family background, testing results). There is one brief section on early reading in this volume. In it Terman reports that 44.3% (133) of the boys surveyed and 46.4% (117) of the girls surveyed learned to read before starting school. Parental responses to the question of how these children learned to read revealed that "in the large majority of cases only incidental or casual assistance is reported" (p.272). In 17 cases the child "taught himself" without the knowledge of any member of the family. Many cases were cited in which parental help with reading was given "in response to urgent solicitations on the part of the child". (p.272).

Volume II:

Terman examines 301 of the most "eminent" men and women in history in an attempt to determine the degree of "mental endowment" which characterizes individuals of genius in childhood and youth. The method of the study is historiometry in which historical records and events from the subjects' childhood and youth are studied. Terman focuses upon I.Q. to a great degree. Individual case studies of the 301 subjects are presented, however, and it is within these that some instances of early reading are discussed.

TORREY, J.W. Learning to read without a teacher: A case study. *Elementary English*, 1969, 46, 550-556, 658.

This article is a case study of 'John', a disadvantaged five-year-old black American child from the urban South who was an early reader. Torrey presents data on John's personal and reading history, his

family background and his results from standardized reading and intelligence tests. There is also an anecdotal description of John's actual reading behaviour in various situations. Torrey's major conclusions from the study are: (1) John appears to have learned to read by having "asked just the right questions in his own mind about the relation between language and print and thus to have bridged the gap between his own language and the printed form" (p.556). There was no conscious effort on anyone's part to teach John. (2) Neither high verbal ability nor cultural advantage is necessary to learn to read early. (3) The key to learning is discovering how meaning, not sounds, are represented in print. "John's phonic knowledge and his word attack skills were strictly sub-ordinate to the task of reading what it said". (p.556).

WHITE, D. *Books before five.* Auckland: New Zealand Council for Educational Research, 1954.

This book is the diary which a mother/librarian kept of her daughter's experience with reading and writing from early 1948 (child's age approximately two) to late 1950 (child's age approximately five). There are many insightful comments on the connection between a child's life and books - why book X works at Y time, why not. Also many descriptions/evaluations of children's books are included. This book is written by a mother who is knowledgeable about literature and writing and is in touch with her child.

Some points on early reading which are repeated throughout the book: (a) The child enjoyed the repetition in stories such as the Mother Goose ones and found comfort in the "simple patterns of a familiar story" even when she was capable of following more complicated things. (b) In the younger years it was important that there be 'known things' in the books.

WITTY, P. & BLUMENTHAL, R. The language development of an exceptionally gifted pupil. *Elementary English,* 1957, 34, 219-217.

The authors report on the family background, physical status, intelligence, personality and achievement of a four-year-old boy whose reading vocabulary and comprehension were equal to that of a typical fourth or fifth grader. They found that achievement in reading "extraordinary". The child read books and magazines and basal readers designed for fifth and sixth grades. He could also read Hebrew. Witty and Blumenthal feel the ability cannot be accounted for solely in terms of good environment and say, "One is at a loss to explain its origin" (p.217).

WITTY, P. & COOMER, A. A case study of gifted twin boys. *Exceptional Children,* 1955, 22, 104-108, 124-125.

The authors detail results from a number of intelligence tests and reading tests on the twin boys. They also examined the family background of the twins' parents and the physical development of the twins

themselves. Both twins learned to read at the age of three "simply by asking questions and having their questions answered by their parents" (p.107). Information about school experience, home interests and social adjustment of the twins is also included.

† YLISTO, I.P. *An empirical investigation of early reading responses of young children.* Unpublished doctoral dissertation, The University of Michigan, 1967.

Ylisto proposes that in learning to read young children go through six sequential steps, from passive awareness to independent word recognition. An inventory of 25 word symbols, such as road signs and cereral packet labels, was constructed. Each item was arranged in a series of the six steps: (1) photograph of the symbol in its natural setting, (2) drawing of the symbol in its natural setting, (3) drawing of the symbol in its immediate setting, (4) symbol in isolation, (5) symbol in sentence context and (6) symbol in story context. The inventory was administered to 82 four-year-olds, 76 five-year-olds and 71 six-year-olds who had not received formal reading instruction. Results show that 17 children recognized all the symbols through the six step , 109 recognized some symbols through various steps and 103 did not recognize any symbols. Each individual's response to each item and the pattern of response for the total population demonstrated a progressive dispersion over the six-step sequence. Thus, Ylisto concludes that the reading process occurs in a step-by-step process involving the child's interacting with the environment.

SUPPLEMENT

The following annotations were obtained to late to be included in the main body of this bibliography:

BETTELHEIM, B. The danger of teaching your baby to read. *Ladies Home Journal*, 1966, 83, 38-40.

This article is in the form of a dialogue between Bettelheim and about ten mothers. Bettelheim argues that teaching young children to read may result in the child's becoming isolated from parents and peers rather than socialized. He maintains that the kindergarten cannot have both a socialization and an academic program and that the former is preferable.

In many senses Bettelheim takes a narrow view of early reading saying that it is just a skill and that what is really important is thinking. He objects to teaching just a skill. He also points out that some parents teach their children to read merely to satisfy their own vanity rather than considering what is best for the child.

DOMAN, G., STEVENS, G.L. & OREM, R.C. You can teach your baby to read. *Ladies Home Journal*, 1963, 80, 62-63, 124-126.

This article is essentially a cut-down version of Doman's *How To Teach Your Baby to Read.* The authors outline the rationale, materials and method for teaching children who are around two years old to read. The following steps are advocated for the process, and they are explained in the article: (1) Visual Differentiation, (2) Body-image Words, (3) Environmental Vocabulary, (4) Sentences, (5) Reading a Book and (6) The Alphabet.

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